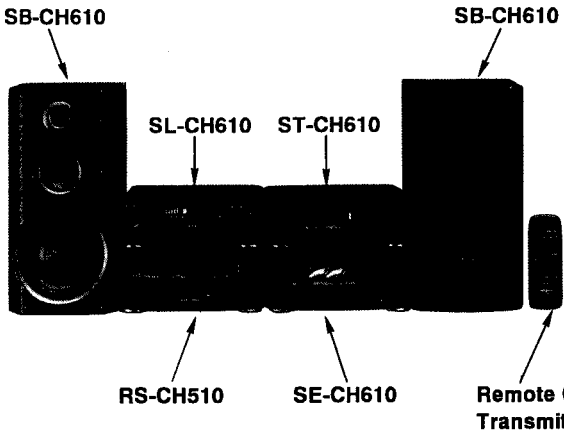
ORDER NO. AD9412357C3

Service Manual

Amplifier

Amplifier

SE-CH610



Colour

(K) : Black

Areas

Suffix for Model No.	Area	Colour
(GC)	Asia, Latin America, Middle East and Africa	(K)

System: SC-CH610

Because of unique interconnecting cables, when a component requires service, send or bring in the entire system.

Specifications

Power output

DIN 1 kHz, THD 1%, both channel driven

2 × 50 W (6Ω)

Total harmonic distortion

Rated power at 1 kHz 1% (6Ω)

Half power at 1 kHz 0.09% (6Ω)

Load impedance 6Ω

S/N (rated power) 84 dB

Frequency response 40 Hz – 30 kHz

■ General

Power consumption 166 W

Power supply

110/127/220/230 – 240 V, AC 50/60 Hz

Dimensions (W × H × D) 270 × 118.5 × 329.5 mm

Weight 4.4 kg

Notes:

Specifications are subject to change without notice.
Weight and dimensions are approximate.
Total harmonic distortion is measured by the digital spectrum analyzer.

System	Tuner/sound processor	Compact disc changer	Amplifier	Cassette deck	Speakers
SC-CH610	ST-CH610	SL-CH610	**SE-CH610**	RS-CH510	SB-CH610

⚠WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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■ Before Repair

(1) Turn off the power supply. Using a 10 Ω, 10 W resistor, connect both ends of power supply capacitors (C701, C702) in order to discharge the voltage.
(2) Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50/60 Hz in NO SIGNAL mode should be shown below with respect to supply voltage 110 V/127 V/220 V/240 V.

Power supply voltage	AC 110~127 V	AC 220~240 V
Consumed current 50Hz	140~380 mA	70~190 mA

■ Protection Circuitry

The protection circuitry may have operated if either of the following conditions is noticed:
* No sound is heard when the power is switched ON.
* Sound stops during a performance.

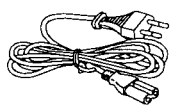
The functions of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.
If this occurs, follow the procedure outlined below:

1. Switch OFF the power.
2. Determine the cause of the problem and correct it.
3. Switch ON the power once again.

Note:
When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON again.

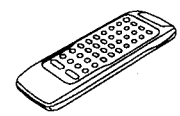
■ Accessories

- AC power supply cord (RJA0019-2K) 1

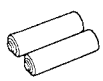


- Flat cable
  Long (REX0511) 1
  Short (REX0608) 1

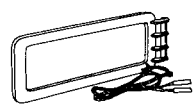
- Remote control transmitter (RAK-CH159WH) 1



- Batteries (UM-4, "AAA", R03) 2
  Note: These are available on sales route.



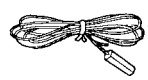
- AM (LW/MW) loop antenna (RSA0012) 1



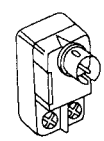
- Antenna holder (RMN0244) 1

- Mounting screw (XTN3+12AFZ) 1

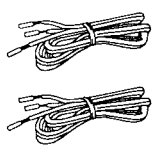
- FM indoor antenna (RSA0007) 1



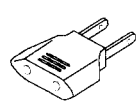
- Antenna plug (RFE0014) 1



- Speaker cords (REE0499) 2



- Power plug adaptor (SJP5213-1) 1

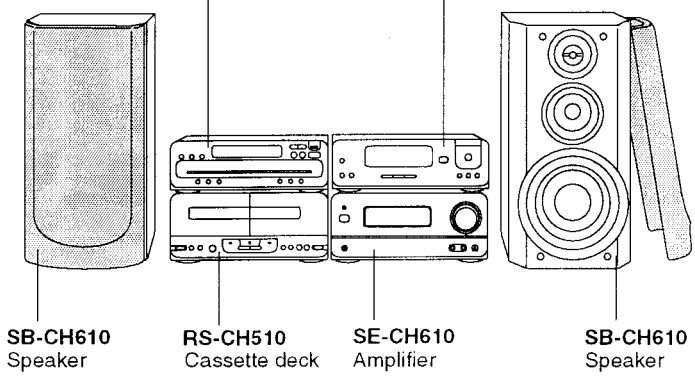


■ Stacking the Components

- Install the various components as shown in the illustration.
- To produce a better stereo sound, install both speakers away from the system.
- The configuration of the amplifier differs according to the area.

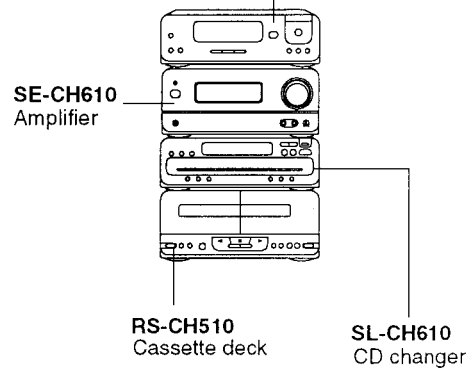
Horizontal stacking **A**

A



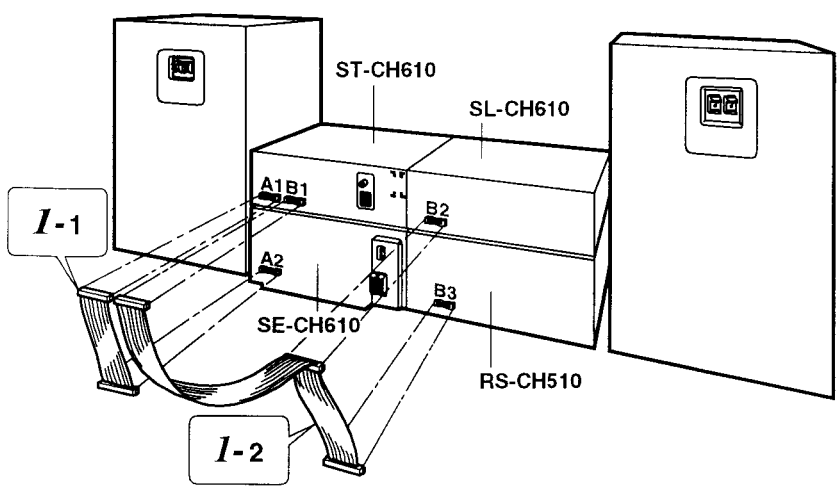
Vertical stacking **B**

B

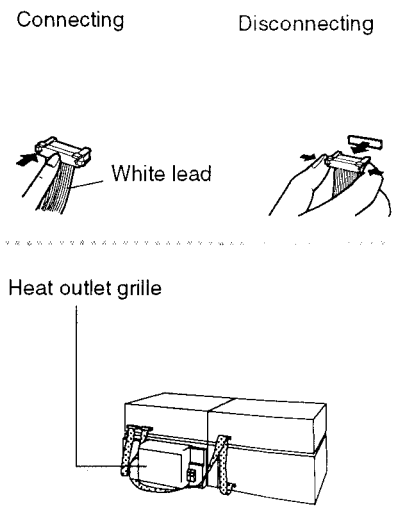


■ Connections

C



1



System connections **C**

Connect the AC power supply cord after you have connected all other cables.

1 Connect the flat cables.

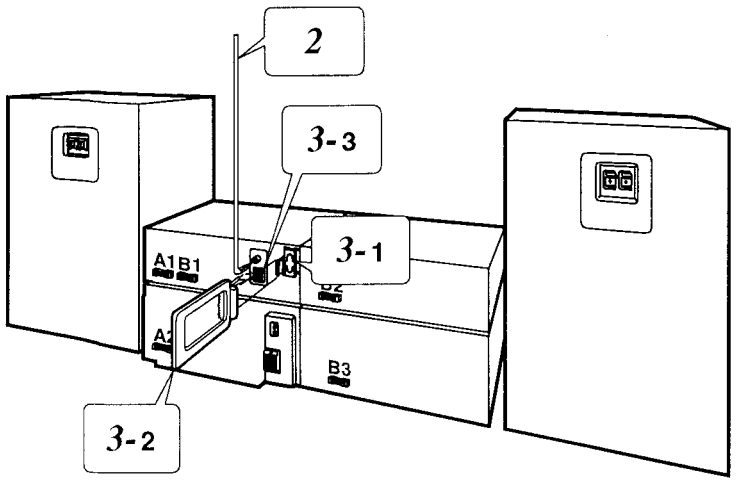
Hold the connector with the recessed part up and press in at the center until you hear a click.

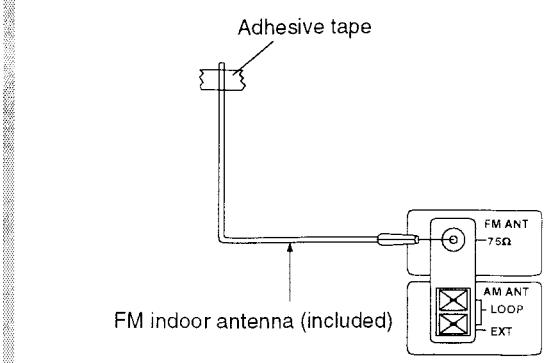
1. Connect the shorter flat cable to the terminal of the tuner/sound processor and amplifier.
2. Connect the longer flat cable to the terminal of the tuner/sound processor, compact disc changer, and cassette deck.

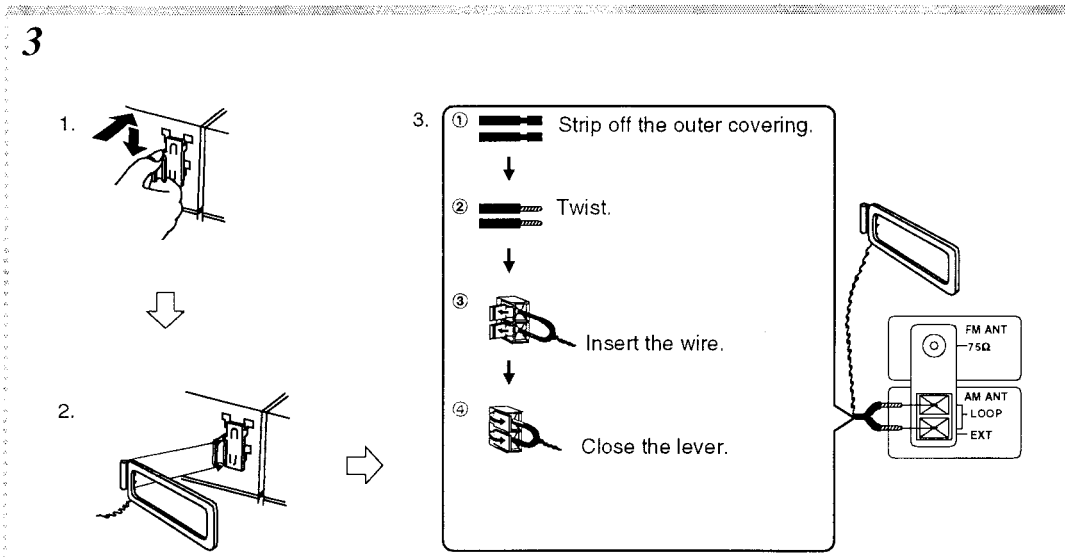
Be sure to connect the blue-colored connector to B1 (tuner/sound processor).
After connection, hold and press the cable as flat to the back of the unit as possible. (To minimize noise pickup while listening an AM broadcast)

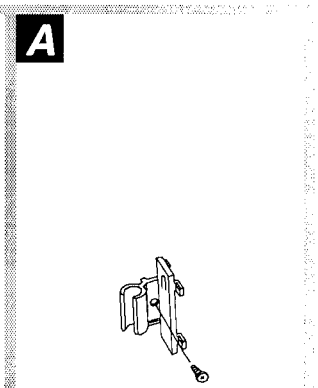
Do not try connecting or disconnecting the flat cables while the power is switched to ON.

(To be continued)









2 Connect the FM indoor antenna.

Install the antenna on a wall at a height and in a direction which result in the best reception.

The tip of the internal antenna wire should not come into contact with any metal objects.

When you cannot get a good reception with this FM indoor antenna, we recommend you install an FM outdoor antenna (not included).

3 Connect the AM (MW/LW) loop antenna.

1. Attach the antenna holder to the rear panel of the tuner/sound processor. Press the antenna holder hard enough to get it fixed firmly in the place, with a click.
2. Clamp the antenna to the antenna holder.
3. Connect the antenna terminal to the rear panel of the tuner/sound processor.

(After you have connected all other cables)

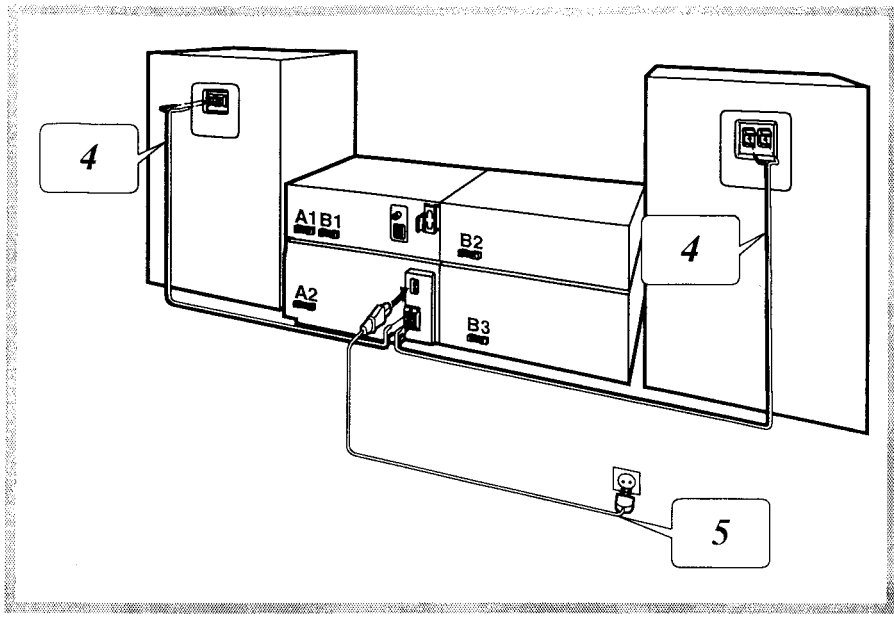
4. While listening to an MW/LW broadcast, position the loop antenna for the best reception.

You may attach the antenna holder to a rack or other structure. Use a screw (included) to attach as shown in the figure. **A**

Note

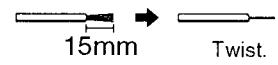
To minimize noise pickup, keep the AM loop antenna cord away from the flat cables.

(To be continued)

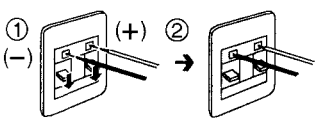


A

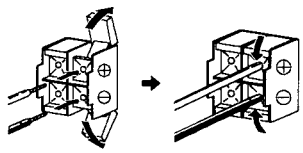
1.

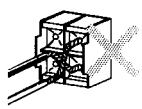


2. SB-CH610



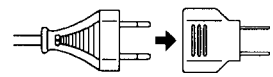
3. SE-CH610





5

B



4 Connect the right (R) left (L) speaker cables.

Notes

- Be sure to connect speaker cables before connecting the AC power supply cord.
- The load impedance of any speaker used with this unit must be 6–8Ω.

Connection of speaker cables A

1. Strip off the outer covering, and twist the center conductor.
   Make sure the bare ends of the wires are not unraveled. (If they are, twist them tight again.)
2. ① Tilt the lever back and insert the wire.
   ② Close the lever and pull the cord gently to be sure that it is secured.
3. Insert the wire to the rear panel of the amplifier, and close the lever.

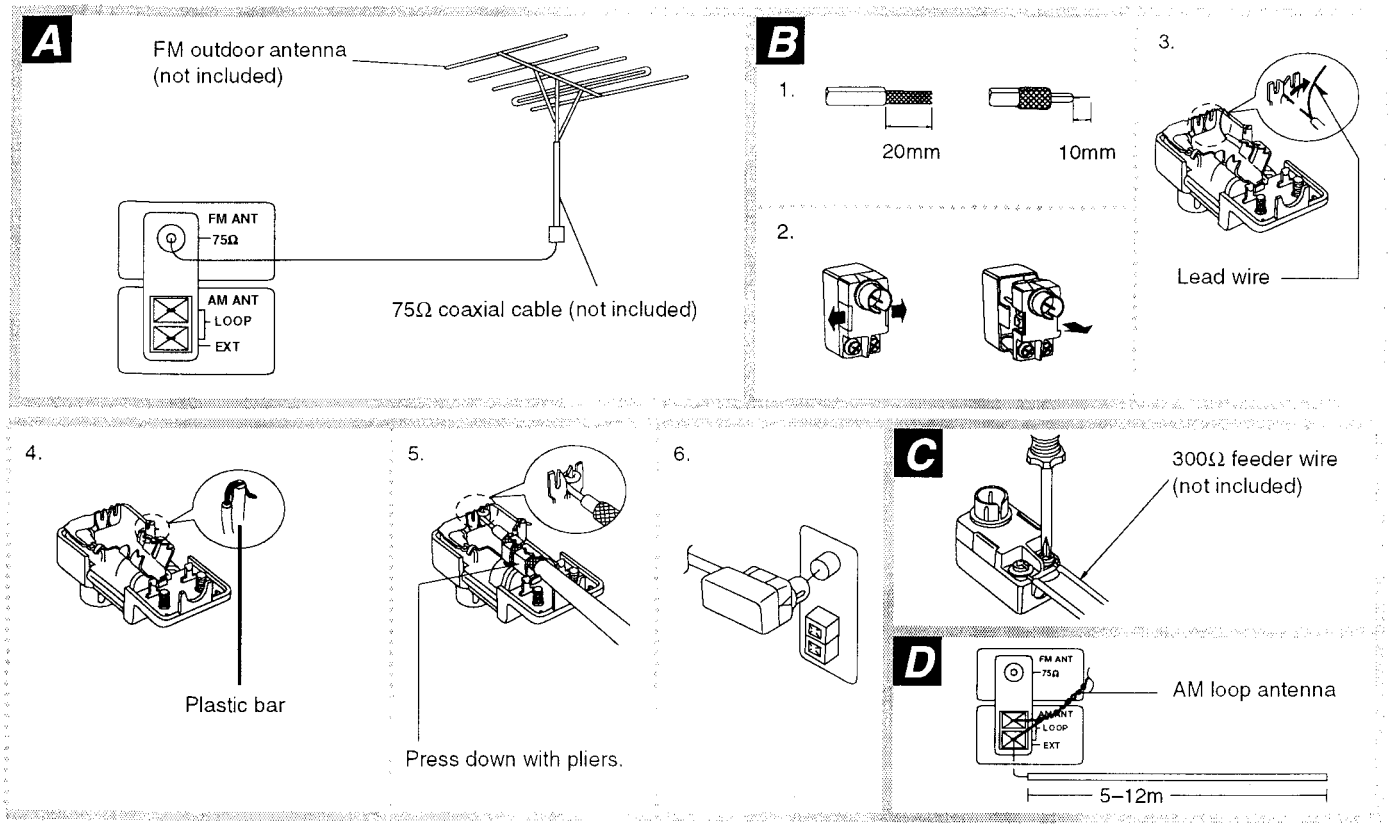
Notes

- To prevent damage to circuitry, never short-circuit positive (+) and negative (−) speaker wires.
- Be sure to connect only positive (+) wires to positive (+) terminals and negative (−) wires to negative (−) terminals.

5 Connect the AC power supply cord after you have connected all other cables and cords.

If the power plug will not fit your socket, use the power plug adaptor (included).

(To be continued)



Optional antenna connections

FM outdoor antenna (not included) A

You may need an outdoor antenna if you use this system in a mountainous region or inside a reinforced-concrete building, etc.
An outdoor antenna should be installed by a competent technician only.

How to use the antenna plug (included)

Two types of wire are most commonly used for connection from the antenna: 300Ω parallel feeder wire or 75Ω coaxial cable. For best resistance to outside interference, the use of 75Ω coaxial cable is suggested.

To connect a 75Ω coaxial cable B

1. Remove a piece of the outer vinyl insulator.
2. Remove the cover while pulling the tabs.

Note

If the tabs are pulled too hard, the casing may be damaged.

3. Remove the lead wire.
4. Clamp the lead wire with the plastic bar.
5. Install the coaxial cable.
   Clamp the cable conductor, and wind it on so that it doesn't contact anything else.
6. Attach the cover and connect the antenna plug.

To connect a 300Ω feeder wire C

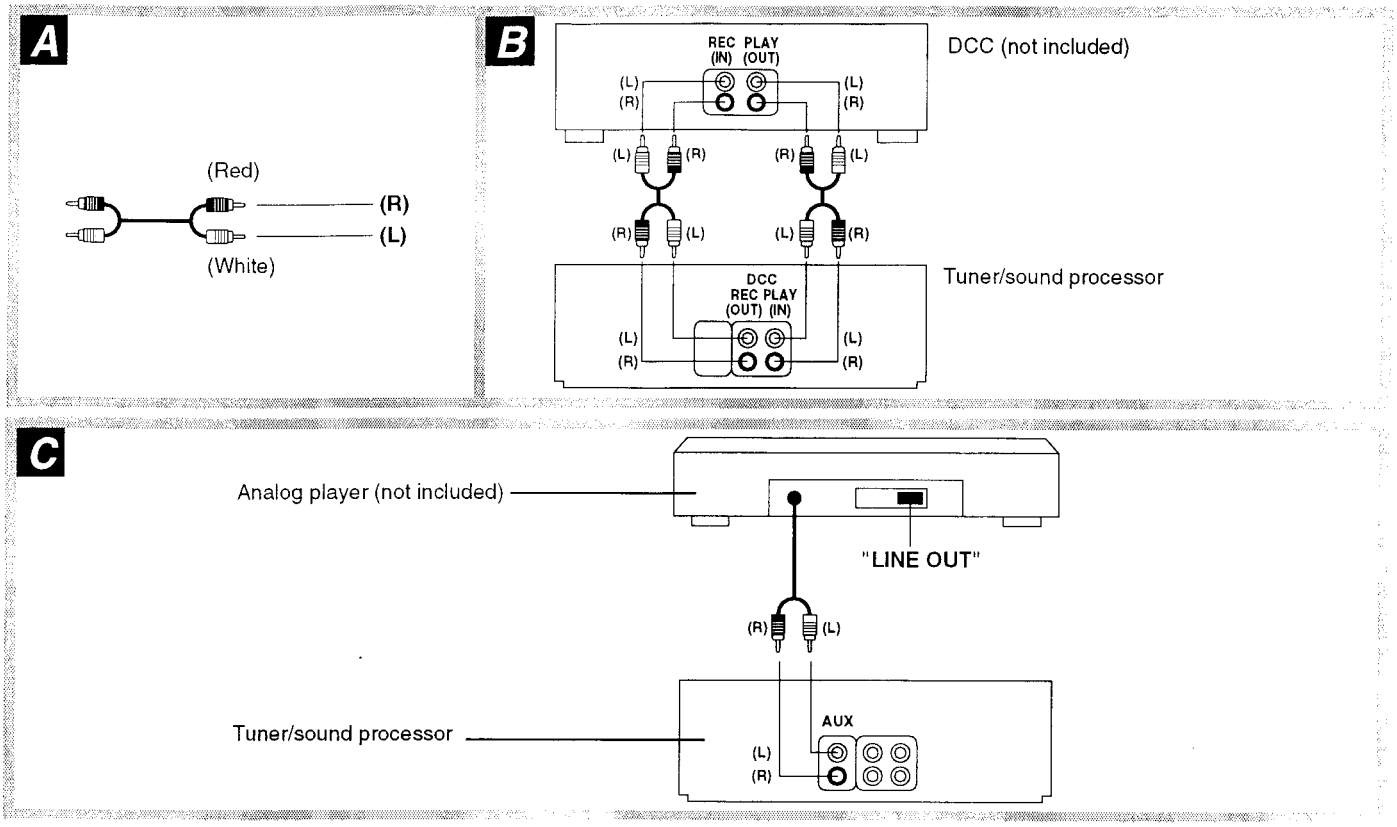
Loosen the screw to connect the feeder wire and tighten it to secure the connection.

AM (MW/LW) outdoor antenna (not included) D

An outdoor antenna may be required in a mountainous region, or if this system is located inside a reinforced-concrete building, etc.

Connect the outdoor antenna without removing the AM loop antenna.
Run 5 to 12 m of vinyl-covered wire horizontally along a window or other convenient location.

(To be continued)



External unit connection

- For details, refer to the Operating Instructions of the units which are to be connected.
- When units other than those described below are to be connected, please consult with your audio dealer.

Connecting the stereo connection cable (not included) A
Connect the red plug to the right (R) connector.
Connect the white plug to the left (L) connector.

DCC (digital compact cassette deck) B

Analog player

This example shows how to connect the analog player with the PHONO OUT/LINE OUT switch.

Only an analog player with a built-in phono equalizer can be connected.
Set the LINE OUT position at the back of the analog player.

■ Location of Controls

① Power "STANDBY ⏻/ON" switch (POWER, STANDBY ⏻/ON)
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

② Standby indicator (STANDBY)
When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.

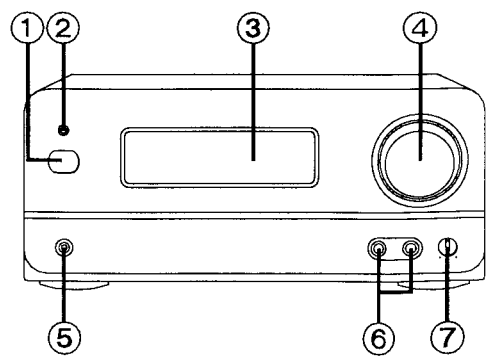
③ Display section
Power meter display shows the left and right output level.

④ Volume control

⑤ Headphones jack Ø 3.5, 32 Ω

⑥ Microphone jack(s) Ø 6.3, 600 Ω

⑦ Microphone volume control



■ Operation Check and Main Component Replacement Procedures

NOTE

1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.
4. Illustrated screws are equivalent to actual size.
5. Refer the parts No. on the page of "Main Component Replacement Procedures", if necessary.

● Contents

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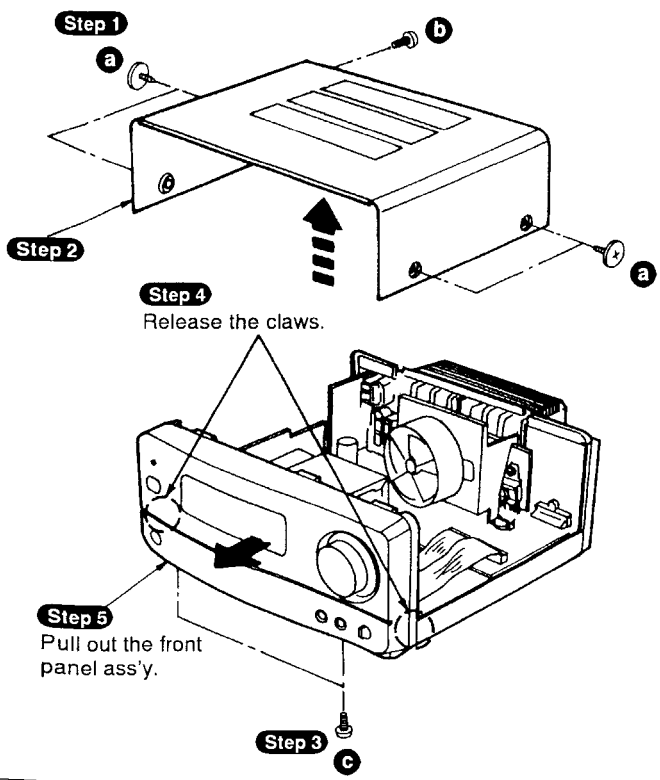
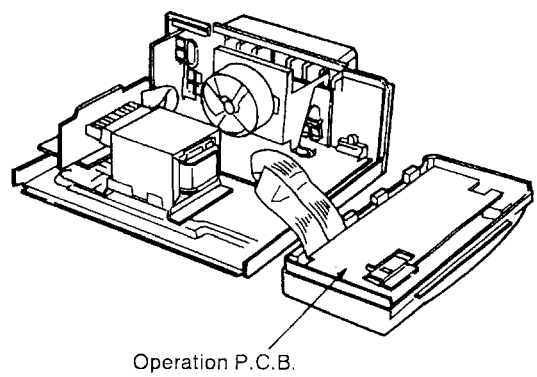
  2. Checking for the main P.C.B. ..... 9.
- **Main Component Replacement Procedures**
  1. Replacement for the power IC and regulator transistors ..... 10.
  2. Replacement for the fan motor ..... 10.

■ Checking Procedure for each P.C.B.

1. Checking for the operation P.C.B.



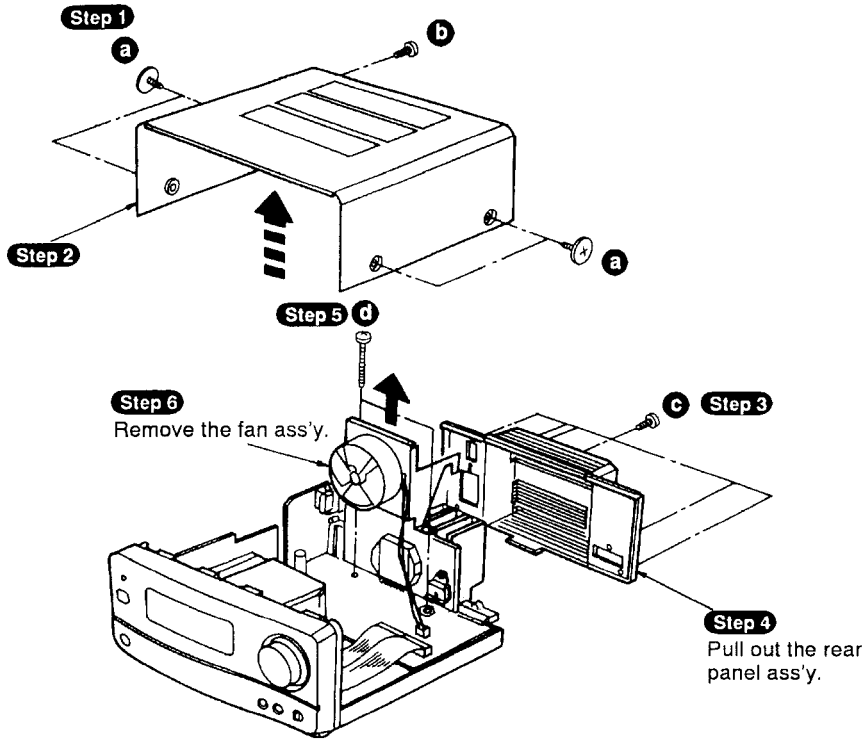
● Checking for the operation P.C.B. as shown below.

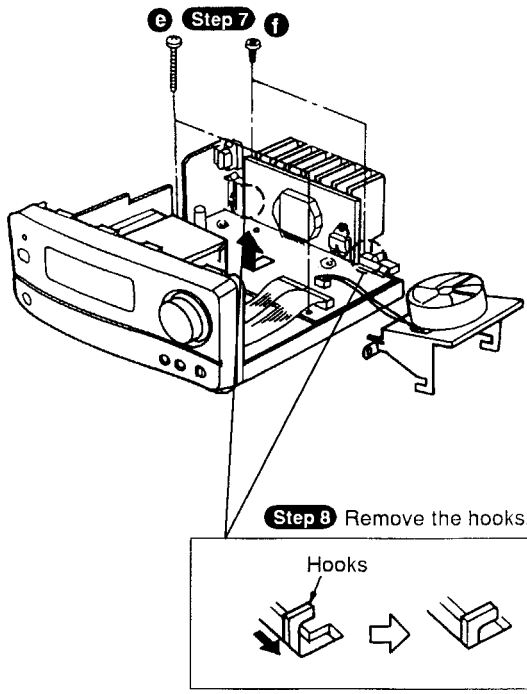


[RHD30007-K1] (Black)

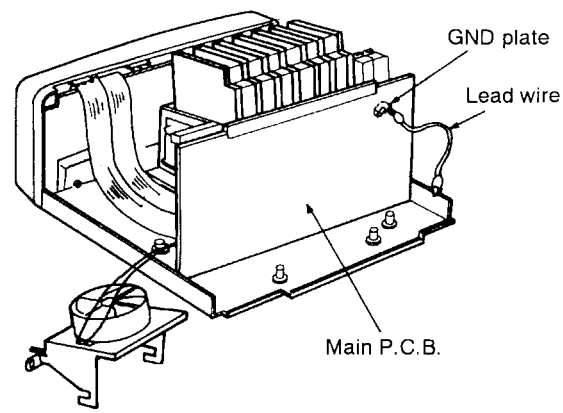
[XTBS3+8JFZ1] (Black)

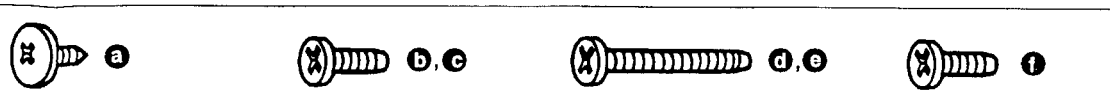
2. Checking for the main P.C.B.





• Checking the main P.C.B. as shown below.



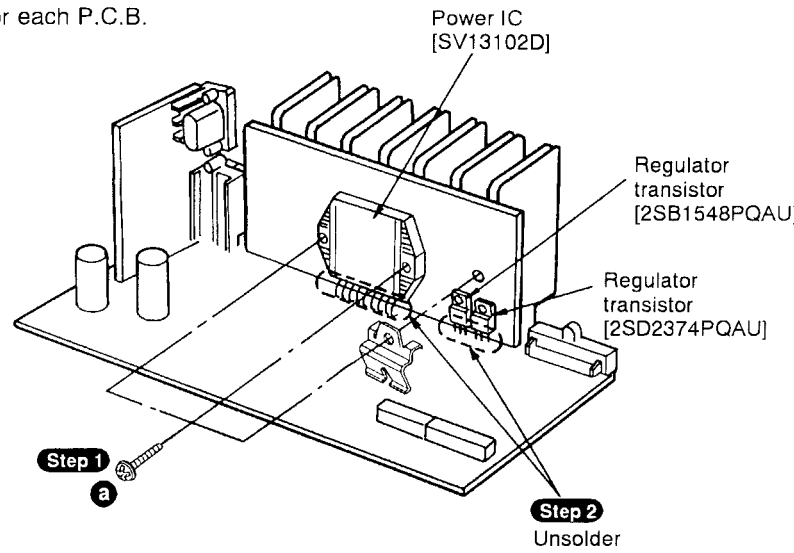


[RHD30007-K1] (Black) [XTBS3+8JFZ1] (Black) [XTB3+20JFZ] (Black) [XTB3+8JFZ] (Black)

■ Main Component Replacement Procedures

1. Replacement for the power IC and regulator transistors

- Follow the item 2 in checking procedure for each P.C.B. on page 9.



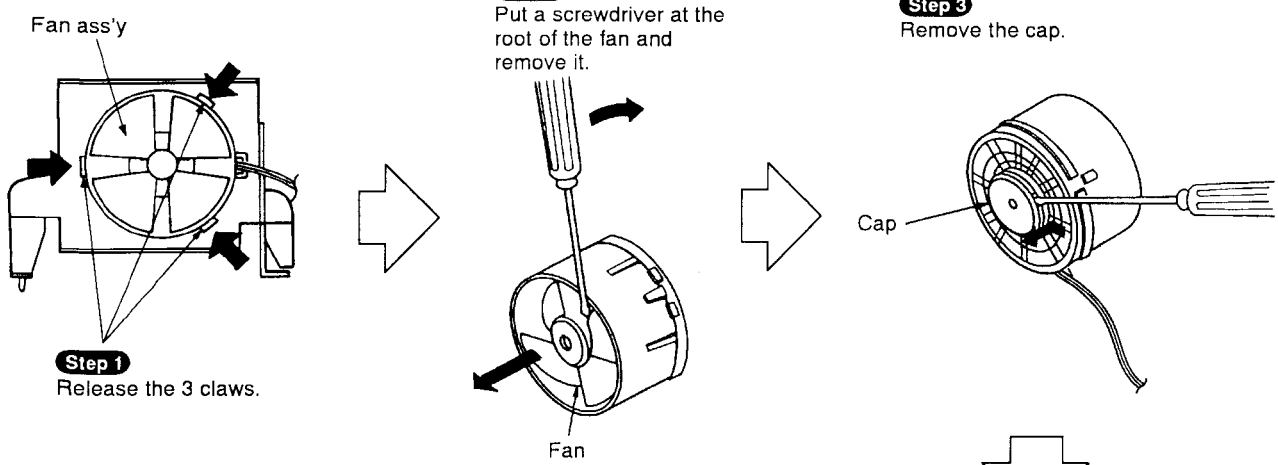
NOTE

When mounting the power IC or regulator transistor, apply silicone compound (RFKX0002) to the rear side of power IC or regulator transistors.

[XTW3+15T]

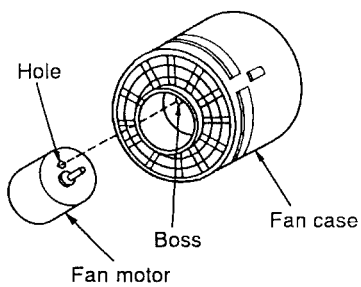
2. Replacement for the fan motor

- Follow the Step 1 Step 2 Step 5 Step 6 in item 2 on checking procedure for each P.C.B on page 9.



NOTE

When replacing the fan motor, align the boss of the fan case with the hole of the fan motor.



■ Power Source ON/OFF of This Unit

1. Connect the AC power cord of this unit to an AC outlet and turn it on. (This unit comes to stand-by mode.)
2. Make test point TP701 short as shown in Fig. 1. POWER indicator lights and this unit comes to power ON mode.

Operation Check

1. Set this unit to power ON mode.
2. Input a signal (1 kHz, 100 mV) to the section between the resistor **R611** (LINE IN for L-ch) and the capacitor **C906** (LINE IN GND) as well as the section between the resistor **R612** (LINE IN R-ch) and the capacitor **C906**.
3. Connect the speaker to the speaker terminals and check if it sounds from the speaker.

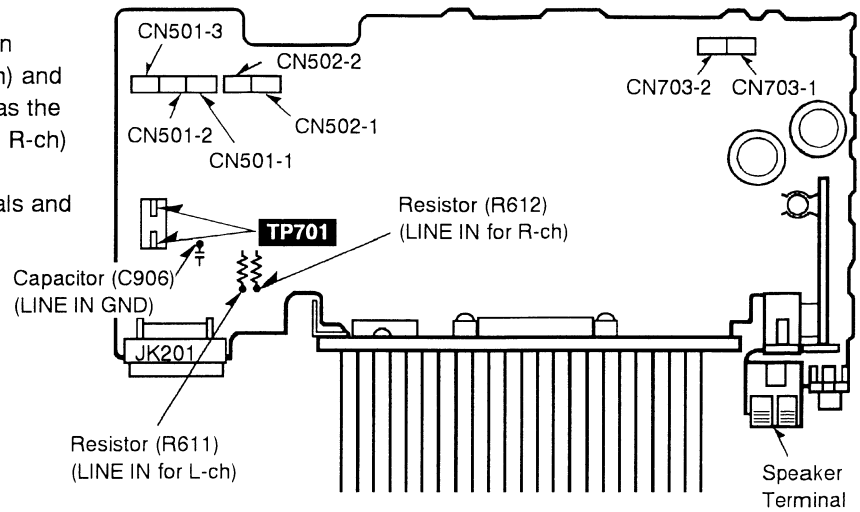


Fig. 1

■ Schematic Diagram

A OPERATION CIRCUIT 12, 13
B HEADPHONES JACK CIRCUIT 12
C MIC JACK CIRCUIT 12
D MAIN CIRCUIT 14, 15
E POWER TRANSFORMER CIRCUIT 15
F VOLTAGE SELECTOR CIRCUIT 15
G AC INPUT TERMINAL CIRCUIT 15

- **This schematic diagram may be modified at any time with the development of new technology.**

Notes:

- **S601** : Power "STANDBY ⏻ /ON" switch (STANDBY ⏻ /ON)
- **S701** : Voltage select switch in 220 V position
- **VR401** : Microphone volume control (MIC VOLUME)
- **VR601** : Volume control (VOLUME)

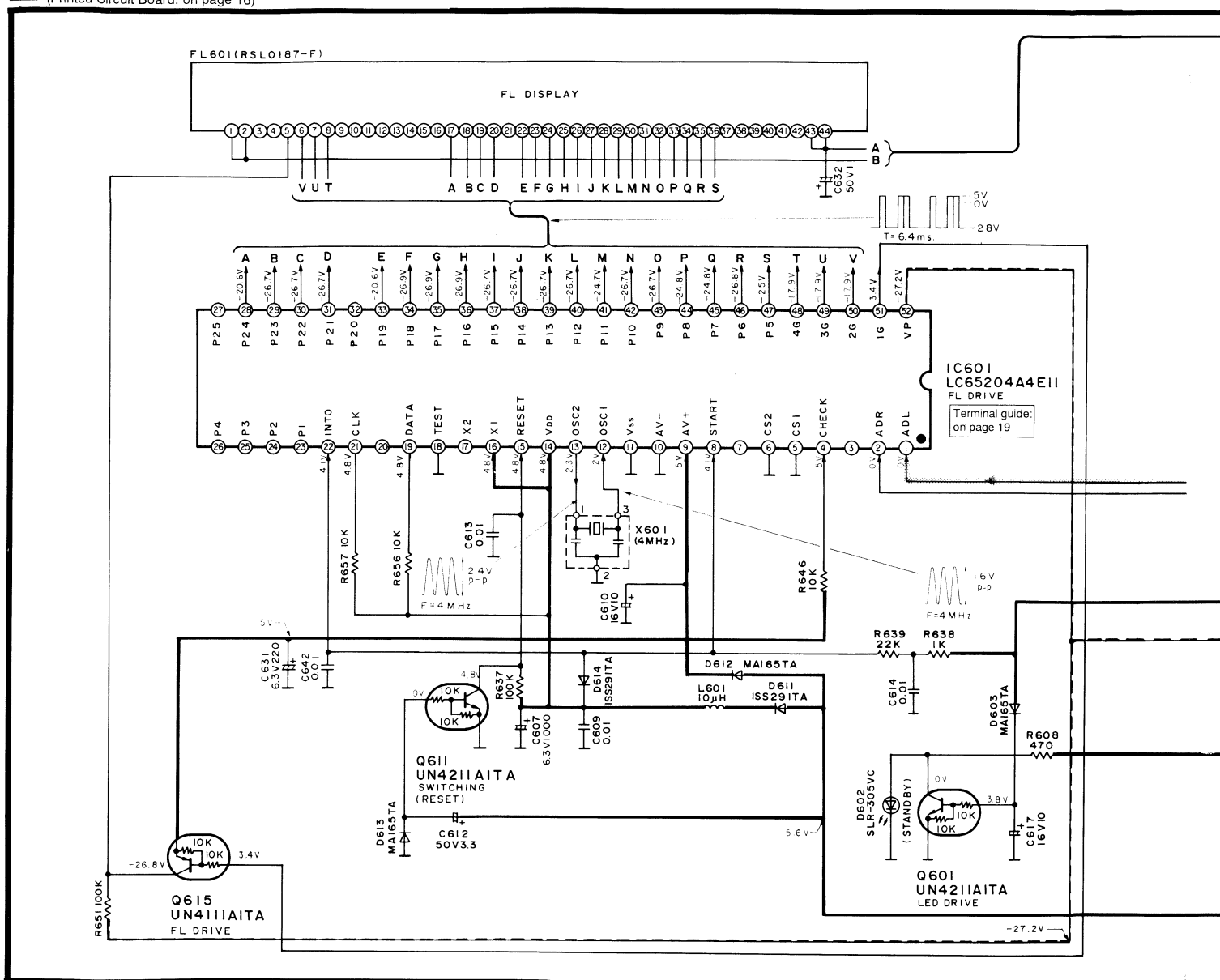
- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
  No mark: Power ON

- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

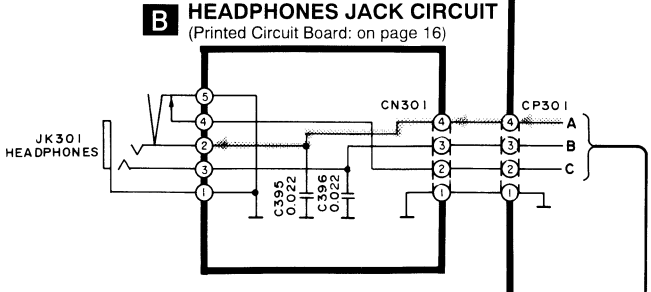
- **Caution!**
  IC and LSI are sensitive to static electricity.
  Secondary trouble can be prevented by taking care during repair.
  Cover the parts boxes made of plastics with aluminum foil.
  Ground the soldering iron.
  Put a conductive mat on the work table.
  Do not touch the legs of IC or LSI with the fingers directly.

- **Voltage and signal line**
  : Positive voltage line : Negative voltage line
  : Source signal Line (L-ch) : Mic signal (L-ch)

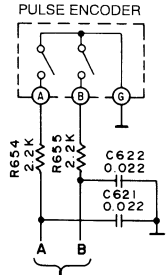
A OPERATION CIRCUIT
(Printed Circuit Board: on page 16)



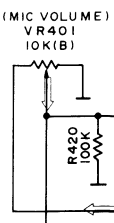
B HEADPHONES JACK CIRCUIT
(Printed Circuit Board: on page 16)



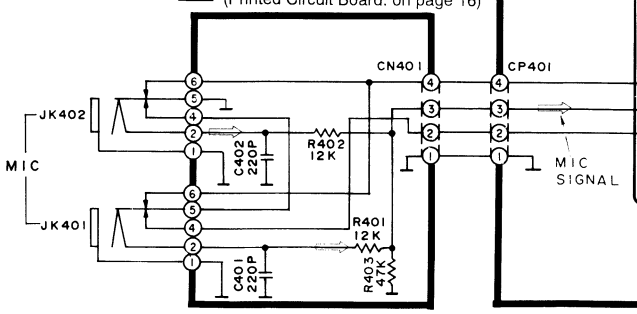
(VOLUME)
VR601
PULSE ENCODER

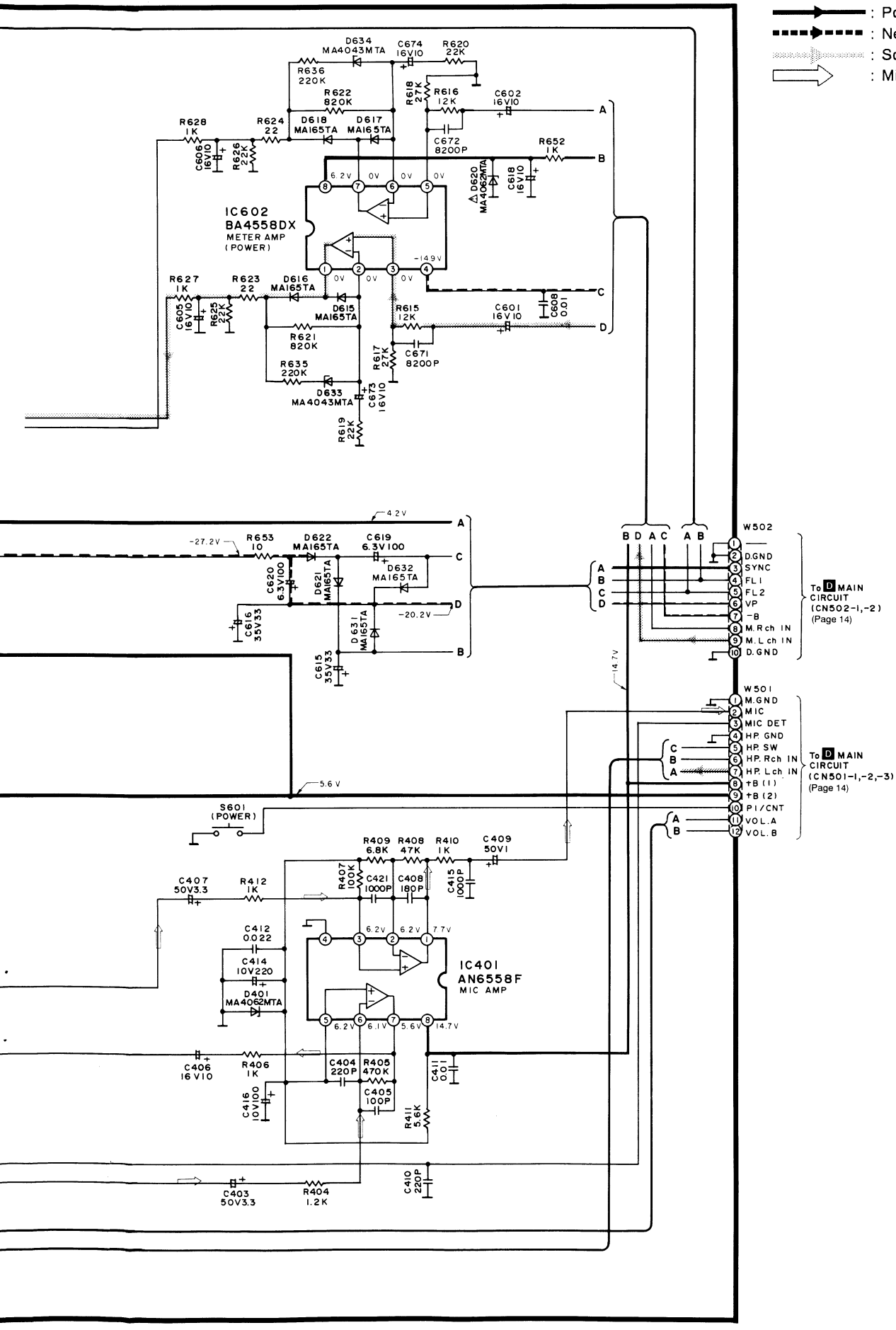


(MIC VOLUME)
VR401
10K(B)



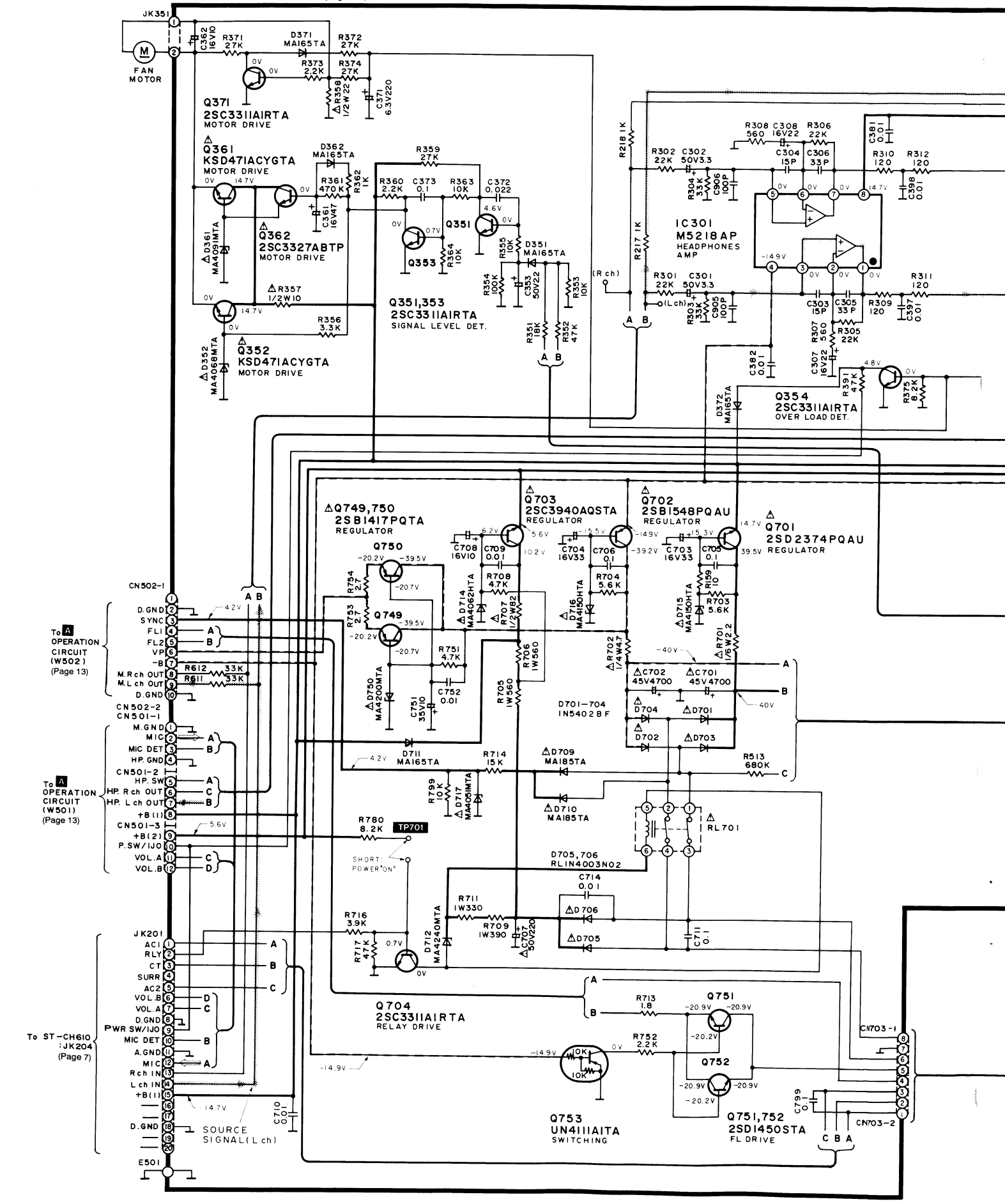
C MIC JACK CIRCUIT
(Printed Circuit Board: on page 16)



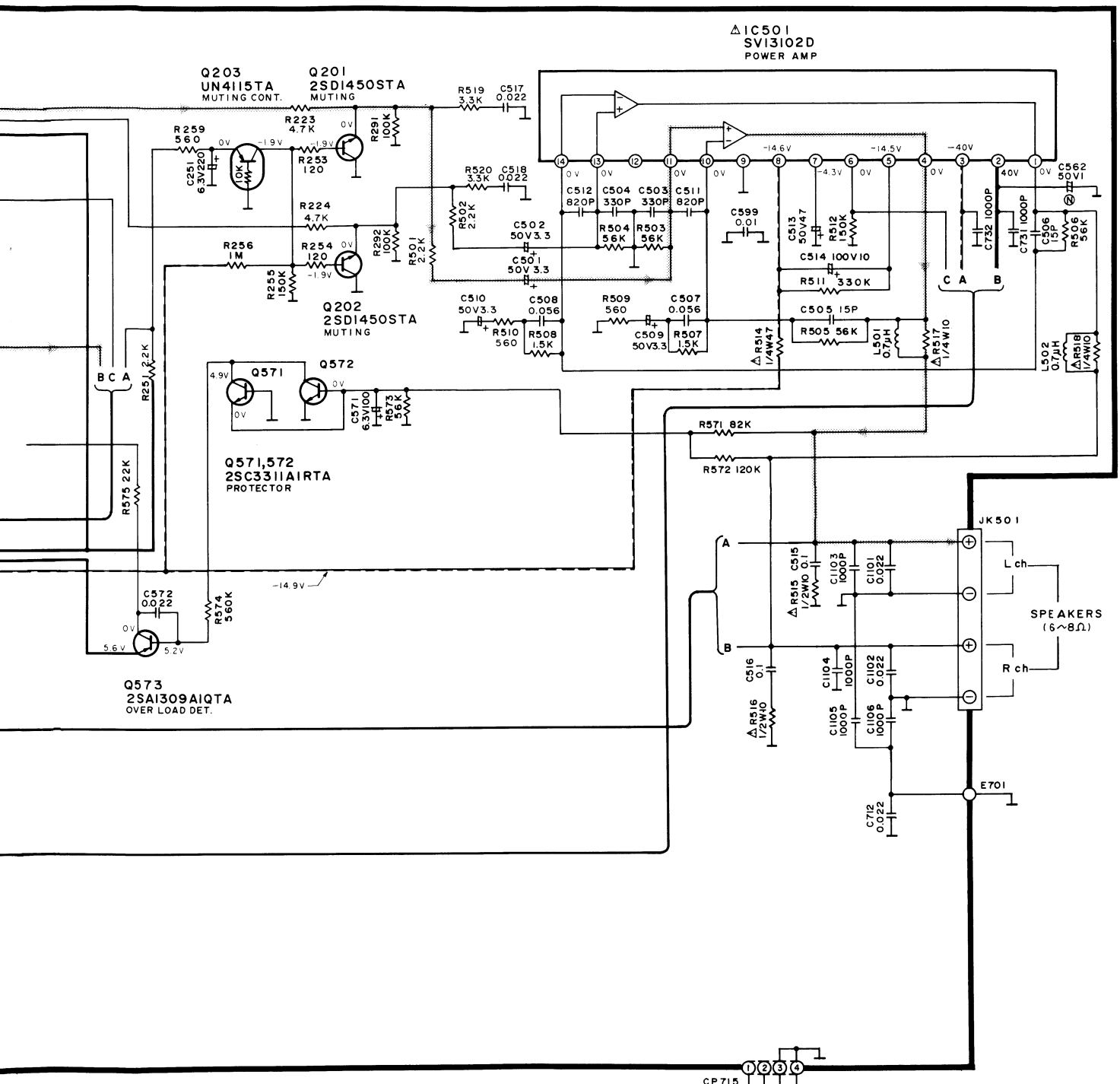

: Positive voltage line
: Negative voltage line
: Source signal Line (L-ch)
: Mic signal (L-ch)
IC602
BA4558DX
METER AMP
(POWER)
IC401
AN6558F
MIC AMP
S601
(POWER)
W502
W501
To D MAIN CIRCUIT (CN502-1,-2) (Page 14)
To D MAIN CIRCUIT (CN501-1,-2,-3) (Page 14)
D.GND
SYNC
FL1
FL2
VP
-B
M.Rch IN
M.Lch IN
M.GND
MIC
MIC DET
HP. GND
HP. SW
HP. Rch IN
HP. Lch IN
+B (1)
+B (2)
P1/CNT
VOL.A
VOL.B

D MAIN CIRCUIT (HEADPHONES AMP/MOTOR DRIVE/REGULATOR/POWER AMP)

(Printed Circuit Board: on page 17)



: Positive voltage line
: Source signal Line (L-ch)
: Negative voltage line
: Mic signal (L-ch)



E **POWER TRANSFORMER CIRCUIT**
(Printed Circuit Board: on page 18)

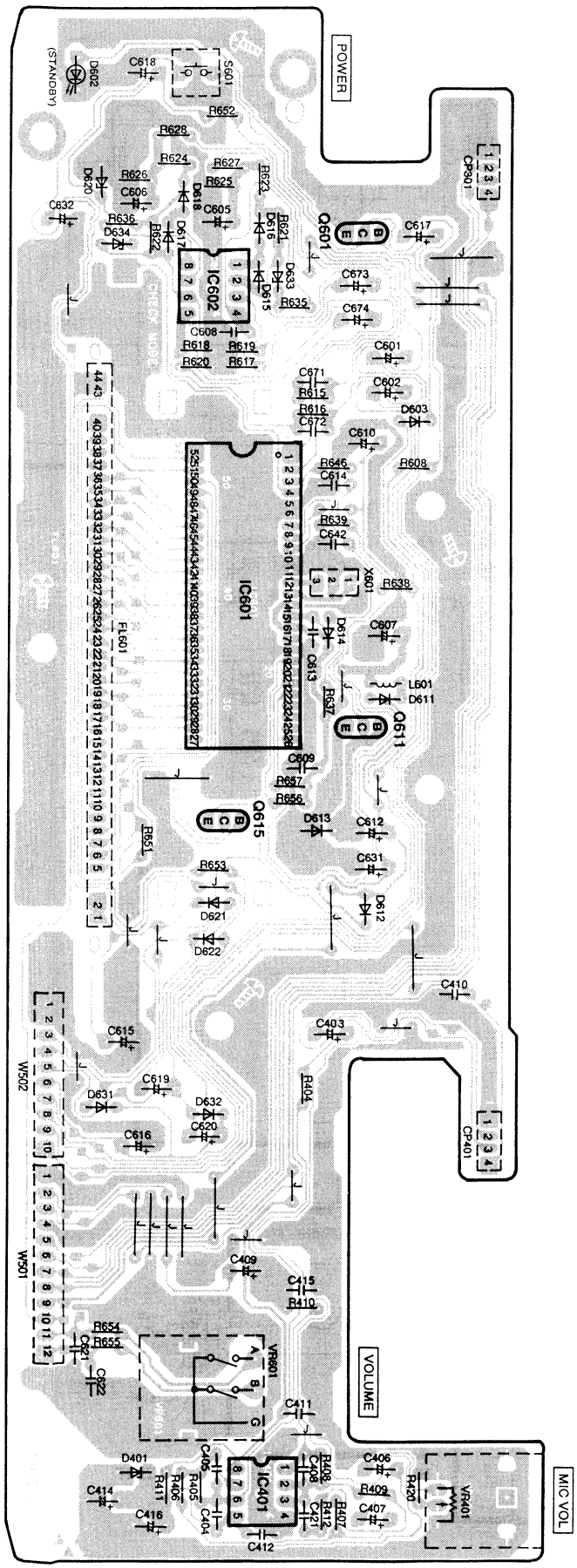
F **VOLTAGE SELECTOR CIRCUIT**
(Printed Circuit Board: on page 18)

G **AC INPUT TERMINAL CIRCUIT**
(Printed Circuit Board: on page 18)

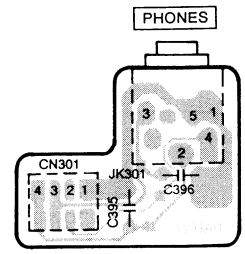
■ Printed Circuit Board Diagram

- This circuit board diagram may be modified at any time with the development of new technology.

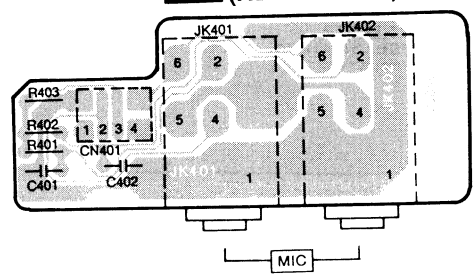
A OPERATION P.C.B. (REP1981A–S)



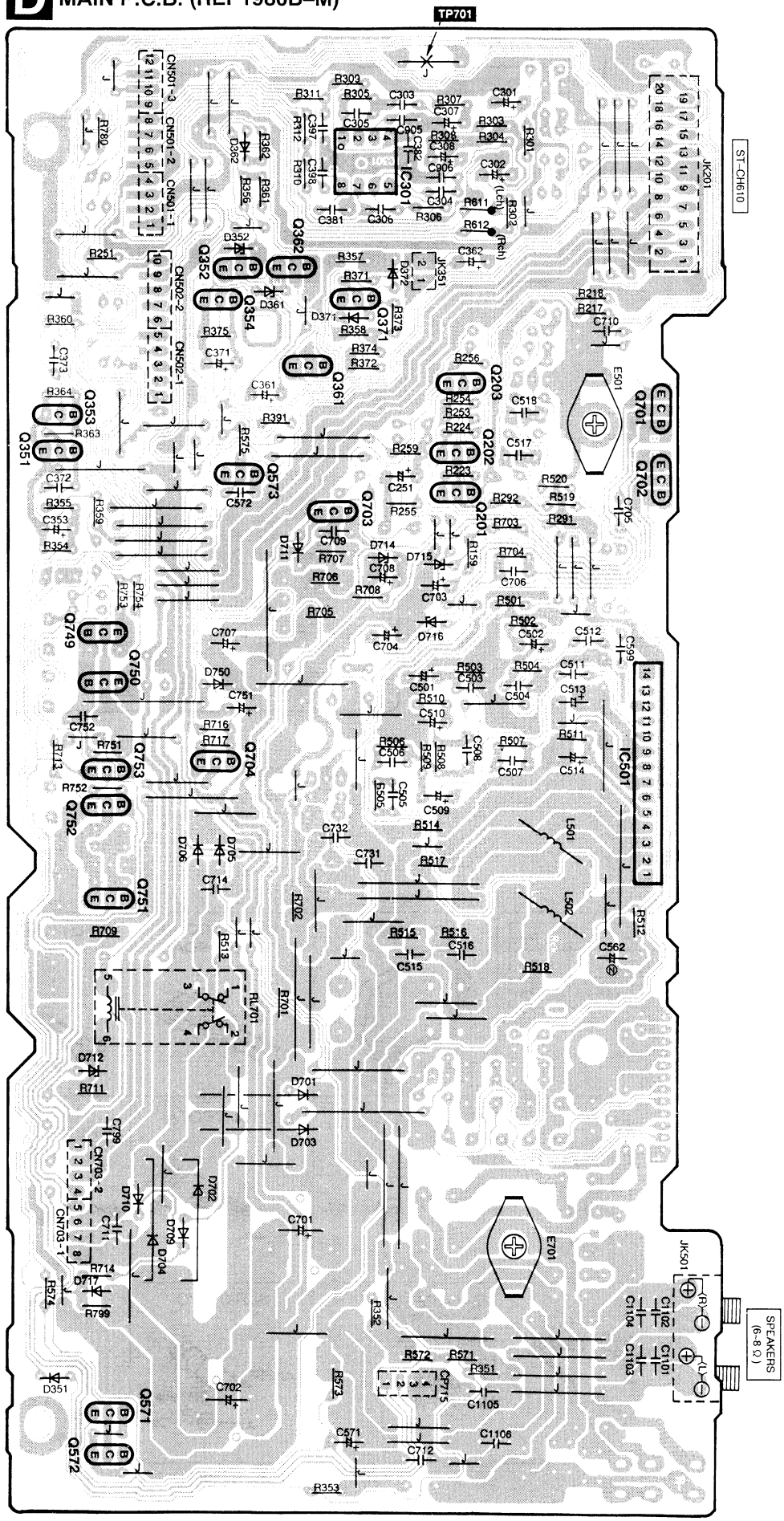
B HEADPHONES JACK P.C.B. (REP1981A–S)



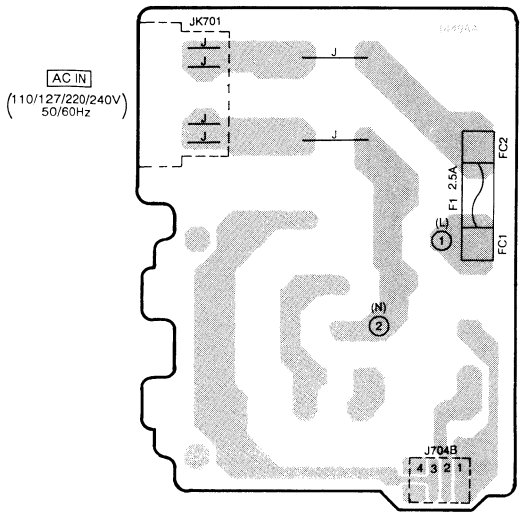
C MIC JACK P.C.B. (REP1981A–S)



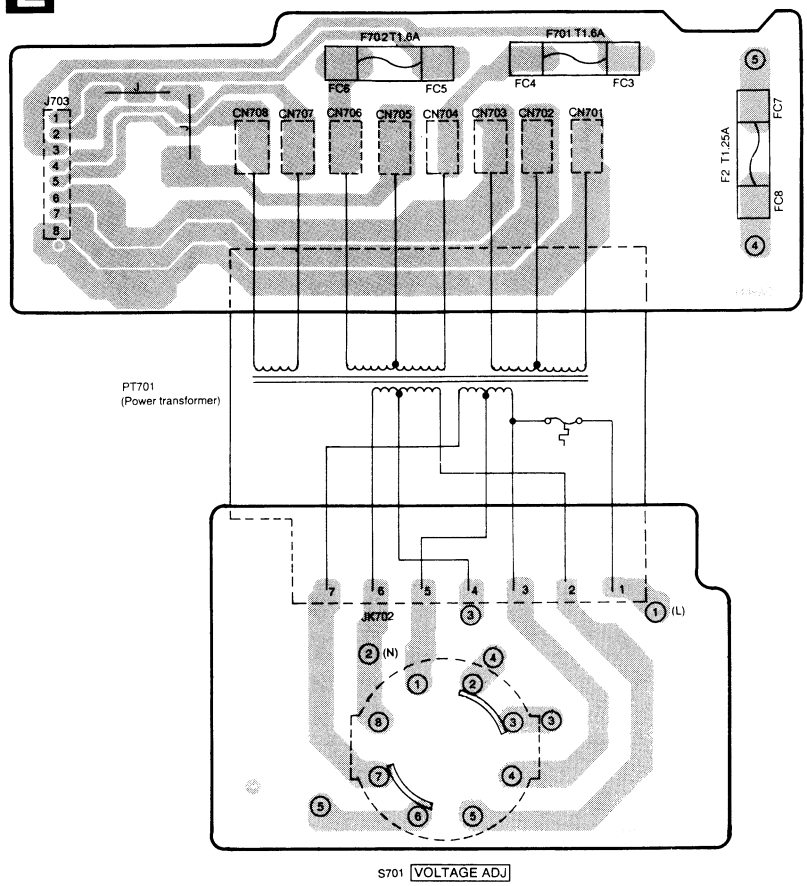
D MAIN P.C.B. (REP1980B–M)



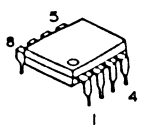
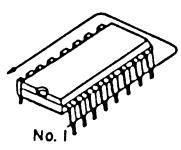
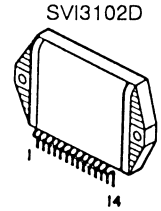
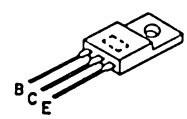
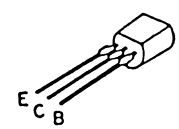
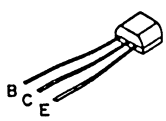
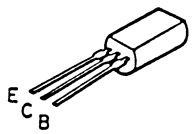
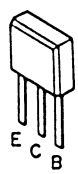
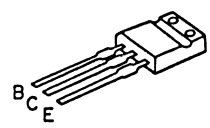
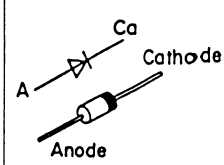
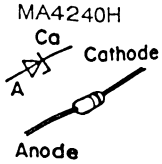
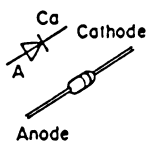
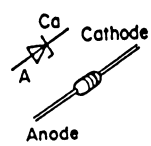
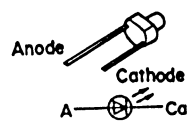
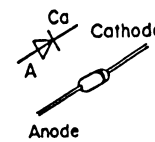
G AC INPUT TERMINAL P.C.B. (REP1451U–P)



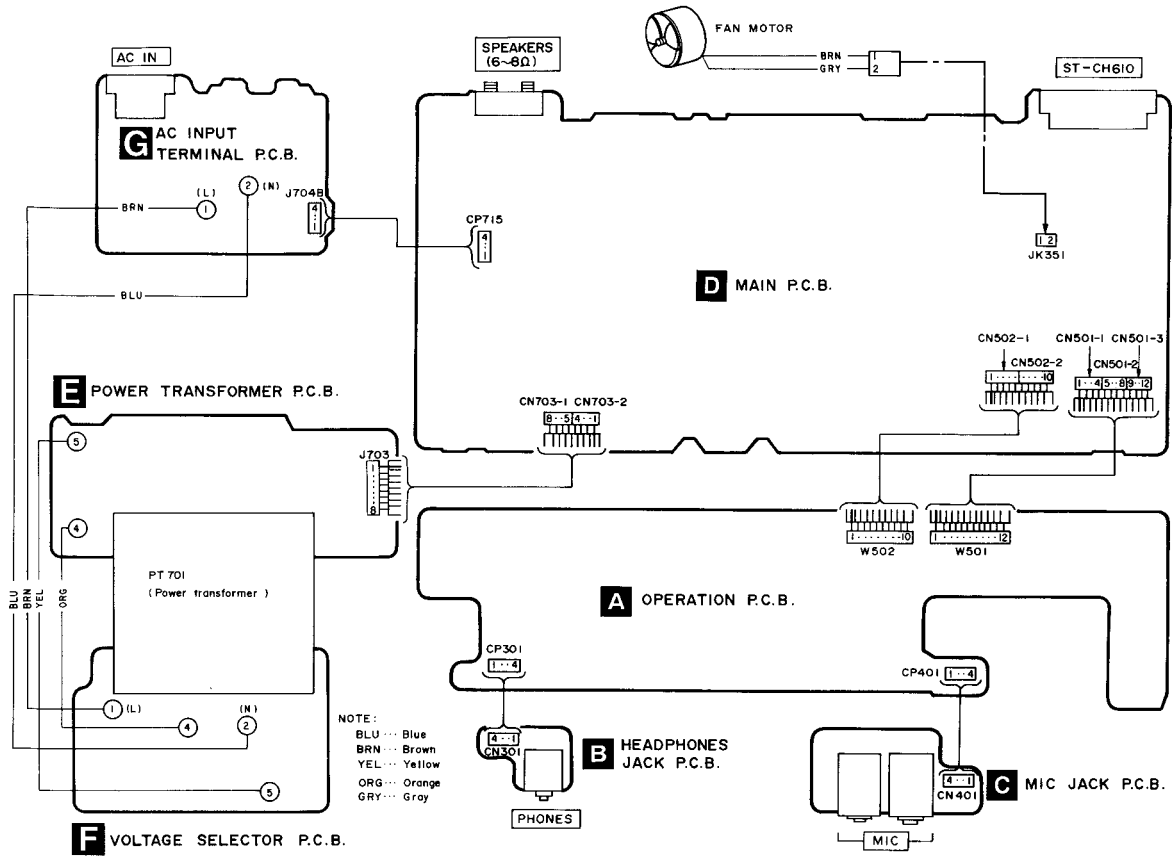
E POWER TRANSFORMER P.C.B. (REP1451U–P)



F VOLTAGE SELECTOR P.C.B.(REP1451U–P)

M5218AP 		AN6558F 8 Pin BA4558DX 8 Pin LC65204A4E11 52 Pin	SVI3102D 	2SB1548PQAU 2SD2374PQAU 	KSD471ACYGTA 
2SC3327-A 	2SC3940AQSTA 		UN4111AITA UN4115 UN4211 2SA1309AIQTA 2SC3311AIRTA 2SD1450RTA	2SB1417PQTA 	1N5402BF RL1N4003N02 
MA4150M MA4200M MA4240H 	MA185TA 1SS291TA 		MA4043M MA4051MTA MA4062MTA MA4062-H MA4068M MA4091-N	SLR-305VC 	MA165 

■ Wiring Connection Diagram



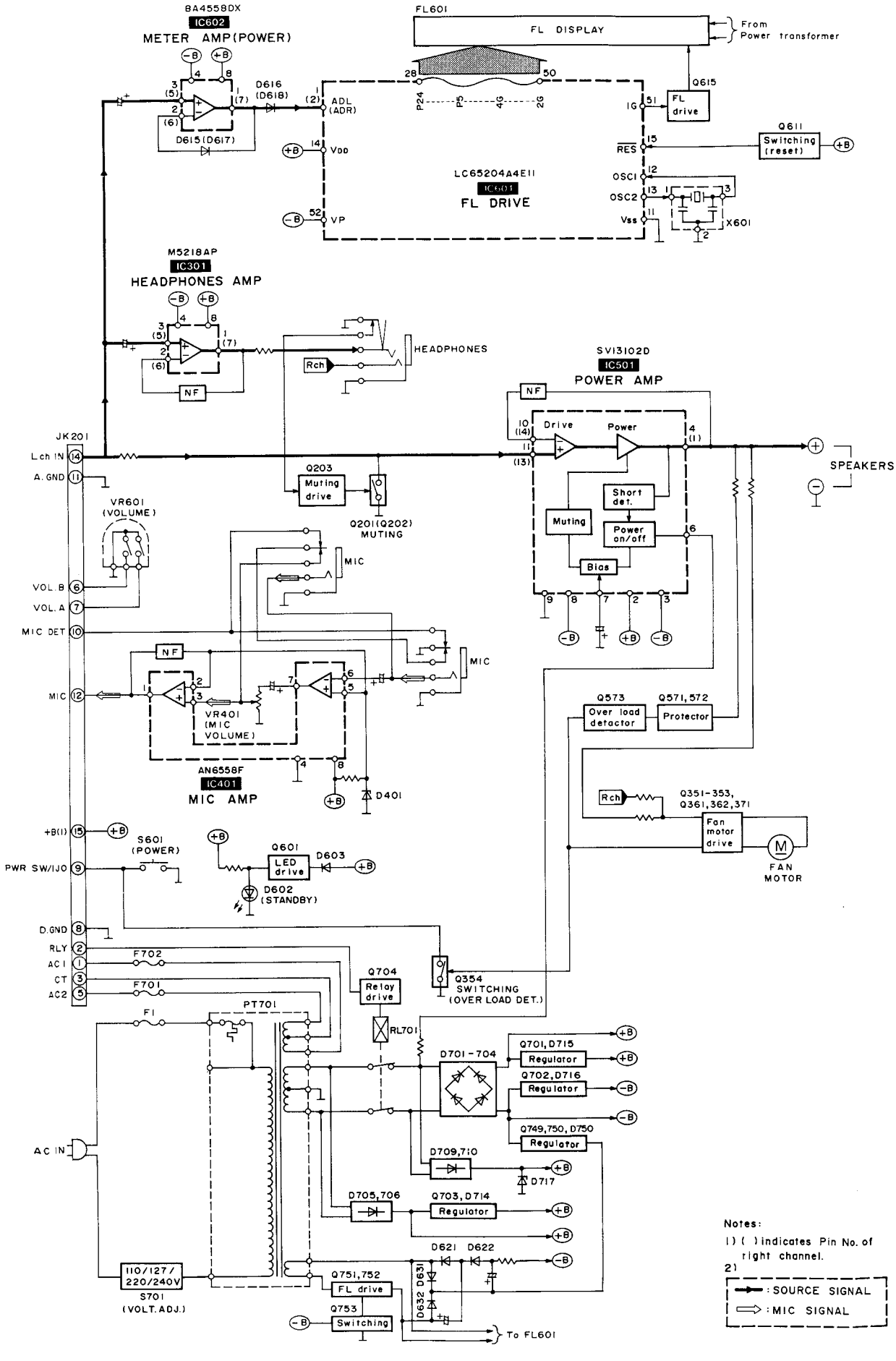
■ Function of IC Terminals

● **IC601 (LC65204A4E11)**

Pin No.	Terminal Name	I/O	Function
1	ADL	I	L-ch level signal input from IC602
2	ADR	I	R-ch level signal input from IC602
3	PA2	—	———
4	CHECK	I	Check mode input (Mode ON: "H")
5	CS1	—	Connected to GND
6	CS2		
7	PB2	—	———
8	START	I	Power ON detection signal input
9	AV +	I	A/D converter standard voltage input
10	AV −	—	
11	Vss	—	Connected to GND
12	OSC1	I/O	Clock signal input/output (Connected to X601)
13	OSC2		
14	VDD	I	Power supply terminal (+5 V input)
15	/RESET	I	Reset signal input (Operation mode: "H", Reset mode "L")

Pin No.	Terminal Name	I/O	Function
16	×1	I	Connected to VDD
17	×2	—	———
18	TEST	—	Connected to GND
19	DATA	I	No used (active pull-up)
20	PF1	—	———
21	CLK	I	No used (active pull-up)
22	INTO	I	Power OFF detection signal input
23 ~26	P1~P4	—	———
27	P25	—	———
28 ~31	P24~P21	O	FL segment drive output
32	P20	—	———
33 ~47	P19~P5	O	FL segment drive output
48 ~51	4G~1G	O	FL grid drive output
52	VP	—	FL pull-down power source input

■ Block Diagram



■ Replacement Parts List

Notes: *Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.
*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.
*Remote Control Ass'y: Supply period for three years from termination of production.
*The "(SF)" mark denotes the standard part.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC301	M5218AP	HEADPHONES AMP.	
IC401	AN6558F	MIC AMP.	
IC501	SVI3102D	POWER AMP.	⚠
IC601	LC65204A4E11	FL DRIVE	
IC602	BA4558DX	METER AMP.	
		TRANSISTOR(S)	
Q201, 202	2SD1450RTA	TRANSISTOR	
Q203	UN4115	TRANSISTOR	
Q351	2SC3311AIRTA	TRANSISTOR	
Q352	KSD471ACYGTA	TRANSISTOR	⚠
Q353, 354	2SC3311AIRTA	TRANSISTOR	
Q361	KSD471ACYGTA	TRANSISTOR	⚠
Q362	2SC3327-A	TRANSISTOR	⚠
Q371	2SC3311AIRTA	TRANSISTOR	
Q571, 572	2SC3311AIRTA	TRANSISTOR	
Q573	2SA1309AIQTA	TRANSISTOR	
Q601	UN4211	TRANSISTOR	
Q611	UN4211	TRANSISTOR	
Q615	UN4111AITA	TRANSISTOR	
Q701	2SD2374PQAU	TRANSISTOR	⚠
Q702	2SB1548PQAU	TRANSISTOR	⚠
Q703	2SC3940AQSTA	TRANSISTOR	⚠
Q704	2SC3311AIRTA	TRANSISTOR	
Q749	2SB1417PQTA	TRANSISTOR	⚠
Q750	2SB1417PQTA	TRANSISTOR	⚠
Q751, 752	2SD1450RTA	TRANSISTOR	
Q753	UN4111AITA	TRANSISTOR	
		DIODE(S)	
D351	MA165	DIODE	
D352	MA4068M	DIODE	⚠
D361	MA4091-M	DIODE	⚠
D362	MA165	DIODE	
D371, 372	MA165	DIODE	
D401	MA4062MTA	DIODE	
D602	SLR-305VC	DIODE	
D603	MA165	DIODE	
D611	1SS291TA	DIODE	
D612, 613	MA165	DIODE	
D614	1SS291TA	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
D615-618	MA165	DIODE	
D620	MA4062MTA	DIODE	⚠
D621, 622	MA165	DIODE	
D631, 632	MA165	DIODE	
D633, 634	MA4043M	DIODE	
D701-704	1N5402BF	DIODE	⚠
D705, 706	RL1N4003N02	DIODE	⚠
D709, 710	MA185TA	DIODE	⚠
D711	MA165	DIODE	
D712	MA4240H	DIODE	
D714	MA4062-H	DIODE	⚠
D715, 716	MA4150M	DIODE	⚠
D717	MA4051MTA	DIODE	⚠
D750	MA4200M	DIODE	⚠
		VARIABLE RESISTOR(S)	
VR401	EVJ02BF02B14	V. R, MIC VOLUME	
VR601	RRV16B24104F	V. R, VOLUME	
		COIL(S)	
L501, 502	RLQYR73M	COIL	
L601	ELEXT100KA9	COIL	
		OSCILLATOR(S)	
X601	EFOEC4004T4	OSCILLATOR(4MHz)	
		DISPLAY TUBE	
FL601	RSL0187-F	DISPLAY TUBE	
		FUSE(S)	
F1	XBA2C25TB0	FUSE, 250V, T2.5A	⚠
F2	XBA2C12TB0S	FUSE, 250V, T1.25A	⚠
F701, 702	XBA2C16TB0	FUSE, 250V, T1.6A	⚠
		SWITCH(ES)	
S601	EVQ21405R	SW, POWER	
S701	ESE37314	SW, VOLTAGE SELECTOR	⚠
		CONNECTOR(S)	

Ref. No.	Part No.	Part Name & Description	Remarks
J704B	RJU057W004	SOCKET(4P)	
CN301	RJU057W004	SOCKET(4P)	
CN401	RJU057W004	SOCKET(4P)	
CN701-708	RJS1A1101T1	SOCKET(1P)	
CN501-1-3	RJS1A6604	CONNECTOR(4P)	
CN502-1, 2	RJS1A6605	CONNECTOR(5P)	
CN703-1, 2	RJS1A6604	CONNECTOR(4P)	
CP301	RJT057W004-1	CONNECTOR(4P)	
CP401	RJT057W004-1	CONNECTOR(4P)	
CP715	RJT057W004-1	CONNECTOR(4P)	
		EARTH TERMINAL(S)	
E501	SNE1004-2	GND PLATE	
E701	SNE1004-2	GND PLATE	
		FUSE HOLDER(S)	
FC1-8	EYF52BC	FUSE HOLDER	

Ref. No.	Part No.	Part Name & Description	Remarks
		RELAY	
RL701	RSY0013M-0	RELAY	⚠
		TRANSFORMER(S)	
PT701	RTP2M5E003	POWER TRANSFORMER	⚠
		JACK(S)	
JK201	RJT065K20	CONNECTOR(20P)	
JK301	RJJ37TN01-C	HEADPHONES JACK	
JK351	SJT3213	CONNECTOR(2P)	
JK401	RJJ65MA01	MIC JACK	
JK402	RJJ65MA01	MIC JACK	
JK501	RJR0054M	SPEAKER TERMINAL	
JK701	SJS9236	AC INLET	⚠
JK702	SJS702-1	CONNECTOR(6P)	

Notes : * Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads(pF) F=Farads(F)
*** Resistance values are in ohms, unless specified otherwise, 1K=1,000(OHM) , 1M=1,000k(OHM)**

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R159	ERDS2TJ100	1/4W 10
R217, 218	ERDS2TJ102	1/4W 1K
R223, 224	ERDS2TJ472	1/4W 4.7K
R251	ERDS2TJ222	1/4W 2.2K
R253, 254	ERDS2EJ121	1/4W 120
R255	ERDS2TJ154	1/4W 150K
R256	ERDS2TJ105T	1/4W 1M
R259	ERDS2TJ561	1/4W 560
R291, 292	ERDS2TJ104	1/4W 100K
R301, 302	ERDS2TJ223	1/4W 22K
R303, 304	ERDS2TJ333	1/4W 33K
R305, 306	ERDS2TJ223	1/4W 22K
R307, 308	ERDS2TJ561	1/4W 560
R309-312	ERDS2EJ121	1/4W 120
R351	ERDS2TJ183T	1/4W 18K
R352	ERDS2TJ473	1/4W 47K
R353	ERDS2TJ103	1/4W 10K
R354	ERDS2TJ104	1/4W 100K
R355	ERDS2TJ103	1/4W 10K
R356	ERDS2TJ332	1/4W 3.3K
R357 ⚠	ERDS1FVJ100T	1/2W 10
R358 ⚠	ERDS1FVJ220T	1/2W 22
R359	ERDS2TJ273	1/4W 27K
R360	ERDS2TJ222	1/4W 2.2K
R361	ERDS2TJ474	1/4W 470K

Ref. No.	Part No.	Values & Remarks
R362	ERDS2TJ102	1/4W 1K
R363, 364	ERDS2TJ103	1/4W 10K
R371, 372	ERDS2TJ273	1/4W 27K
R373	ERDS2TJ222	1/4W 2.2K
R374	ERDS2TJ273	1/4W 27K
R375	ERDS2TJ822	1/4W 8.2K
R391	ERDS2TJ473	1/4W 47K
R401, 402	ERDS2TJ123	1/4W 12K
R403	ERDS2TJ473	1/4W 47K
R404	ERDS2TJ122	1/4W 1.2K
R405	ERDS2TJ474	1/4W 470K
R406	ERDS2TJ102	1/4W 1K
R407	ERDS2TJ104	1/4W 100K
R408	ERDS2TJ473	1/4W 47K
R409	ERDS2TJ682T	1/4W 6.8K
R410	ERDS2TJ102	1/4W 1K
R411	ERDS2TJ562	1/4W 5.6K
R412	ERDS2TJ102	1/4W 1K
R420	ERDS2TJ104	1/4W 100K
R501, 502	ERDS2TJ222	1/4W 2.2K
R503-506	ERDS2TJ563	1/4W 56K
R507, 508	ERDS2TJ152	1/4W 1.5K
R509, 510	ERDS2TJ561	1/4W 560
R511	ERDS2TJ334	1/4W 330K
R512	ERDS2TJ154	1/4W 150K
R513	ERDS2TJ684	1/4W 680K
R514 ⚠	ERD25FJ470	1/4W 47
R515, 516⚠	ERDS1FVJ100T	1/2W 10

Ref. No.	Part No.	Values & Remarks
R517, 518⚠	ERD25FVJ100T	1/4W 10
R519, 520	ERDS2TJ332	1/4W 3.3K
R571	ERDS2TJ823T	1/4W 82K
R572	ERDS2TJ124T	1/4W 120K
R573	ERDS2TJ563	1/4W 56K
R574	ERDS2TJ564	1/4W 560K
R575	ERDS2TJ223	1/4W 22K
R608	ERDS2TJ471	1/4W 470
R611, 612	ERDS2TJ333	1/4W 33K
R615, 616	ERDS2TJ123	1/4W 12K
R617, 618	ERDS2TJ273	1/4W 27K
R619, 620	ERDS2TJ223	1/4W 22K
R621, 622	ERDS2TJ824	1/4W 820K
R623, 624	ERDS2TJ220T	1/4W 22
R625, 626	ERDS2TJ223	1/4W 22K
R627, 628	ERDS2TJ102	1/4W 1K
R635, 636	ERDS2TJ224T	1/4W 220K
R637	ERDS2TJ104	1/4W 100K
R638	ERDS2TJ102	1/4W 1K
R639	ERDS2TJ223	1/4W 22K
R646	ERDS2TJ103	1/4W 10K
R651	ERDS2TJ104	1/4W 100K
R652	ERDS2TJ102	1/4W 1K
R653	ERDS2TJ100	1/4W 10
R654, 655	ERDS2TJ222	1/4W 2.2K
R656, 657	ERDS2TJ103	1/4W 10K
R701 ⚠	ERQ16NKW2R2E	1/6W 2.2
R702 ⚠	ERD2FCVJ4R7T	1/4W 4.7

Ref. No.	Part No.	Values & Remarks
R703, 704	ERDS2TJ562	1/4W 5.6K
R705, 706⚠	ERG1SJ561E	1W 560
R707 ⚠	ERDS1FVJ820T	1/2W 82
R708	ERDS2TJ472	1/4W 4.7K
R709	ERG1SJ391E	1W 390
R711	ERG1SJ331E	1W 330
R713	ERDS2TJ1R8T	1/4W 1.8
R714	ERDS2TJ153	1/4W 15K
R716	ERDS2TJ392T	1/4W 3.9K
R717	ERDS2TJ473	1/4W 47K
R751	ERDS2TJ472	1/4W 4.7K
R752	ERDS2TJ222	1/4W 2.2K
R753, 754	ERDS2TJ2R7T	1/4W 2.7
R780	ERDS2TJ822	1/4W 8.2K
R799	ERDS2TJ103	1/4W 10K
		CAPACITORS
C251	RCE0JKA221BV	6.3V 220U
C301, 302	RCE1HKA3R3BG	50V 3.3U
C303, 304	ECBT1H150J5	50V 15P
C305, 306	ECBT1H330J5	50V 33P
C307, 308	RCE1CKA220BG	16V 22U
C353	ECEA1HKA2R2B	50V 2.2U
C361	RCE1CKA470BG	16V 47U
C362	RCE1CKA100BG	16V 10U
C371	RCE0JKA221BV	6.3V 220U
C372	ECBT1E223ZF	25V 0.022U
C373	ECBT1H104ZF5	50V 0.1U
C381, 382	ECBT1E103ZF	25V 0.01U
C395, 396	ECBT1E223ZF	25V 0.022U
C397, 398	ECBT1E103ZF	25V 0.01U
C401, 402	ECBT1H221KB5	50V 220P
C403	RCE1HKA3R3BG	50V 3.3U
C404	ECBT1H221KB5	50V 220P
C405	ECBT1H101KB5	50V 100P
C406	RCE1CKA100BG	16V 10U
C407	RCE1HKA3R3BG	50V 3.3U
C408	ECBT1H181KB5	50V 180P
C409	ECEA1HKA010B	50V 1U
C410	ECBT1H221KB5	50V 220P
C411	ECBT1E103ZF	25V 0.01U
C412	ECBT1E223ZF	25V 0.022U
C414	ECEA1AKA221B	10V 220U
C415	ECBT1H102KB5	50V 1000P
C416	RCE1AKA101BG	10V 100U
C421	ECBT1H102KB5	50V 1000P
C501, 502	ECA1HAP3R3B	50V 3.3U
C503, 504	ECBT1H331KB5	50V 330P
C505, 506	ECBT1H150J5	50V 15P
C507, 508	ECQV1H563JM3	50V 0.056U
C509, 510	RCE1HKA3R3BG	50V 3.3U

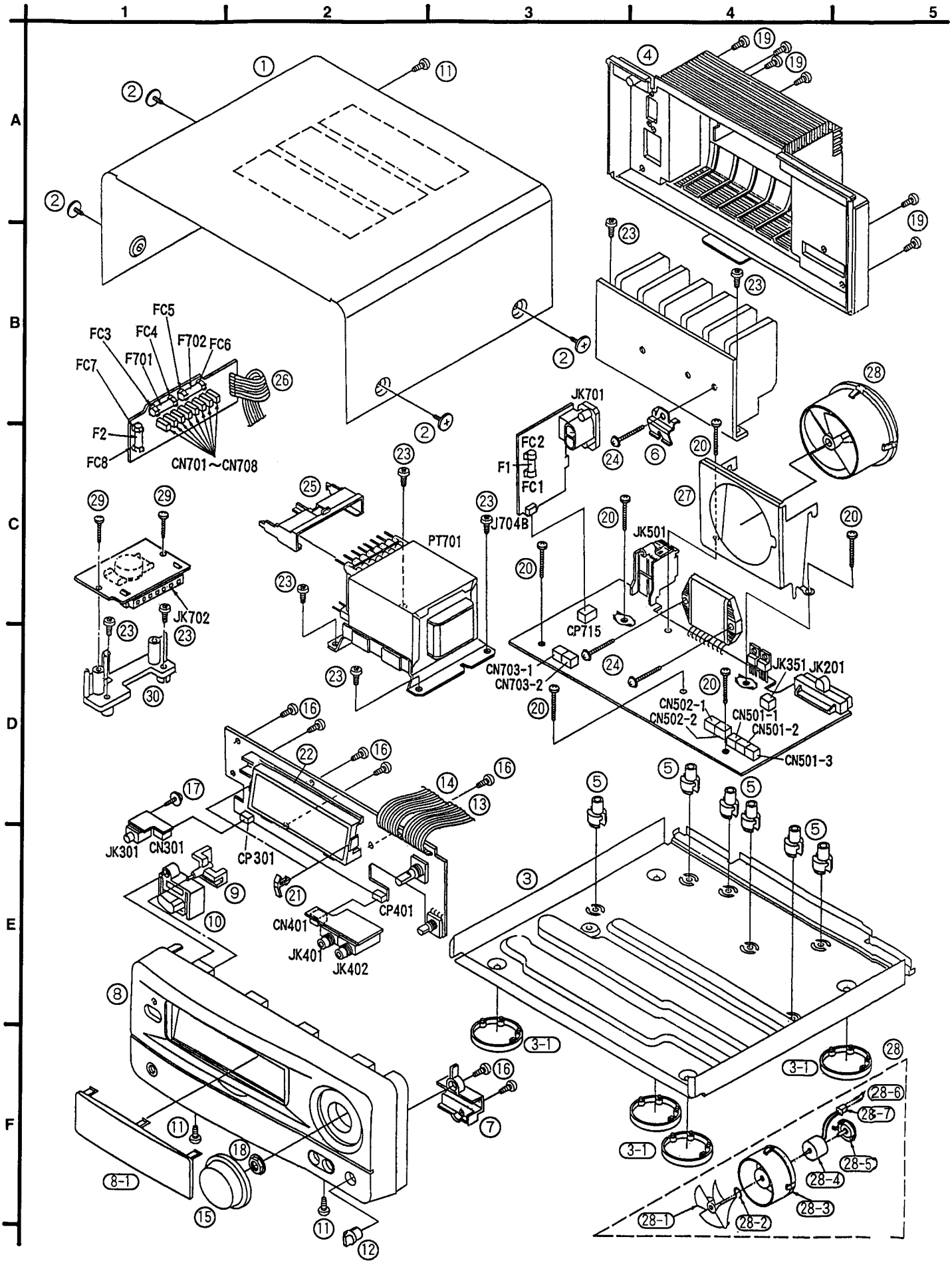
Ref. No.	Part No.	Values & Remarks
C511, 512	ECBT1H821KB5	50V 820P
C513	RCE1HM470BV	50V 47U
C514	ECA2AAP100B	100V 10U
C515, 516	ECBT1H104ZF5	50V 0.1U
C517, 518	ECQB1H223JF3	50V 0.022U
C562	ECEA1HKN010B	50V 1U
C571	RCE0JKA101BV	6.3V 100U
C572	ECBT1E223ZF	25V 0.022U
C599	ECBT1C103MS5	16V 0.01U
C601, 602	RCE1CKA100BG	16V 10U
C605, 606	RCE1CKA100BG	16V 10U
C607	RCE0JM102BV	6.3V 1000U
C608, 609	ECBT1E103ZF	25V 0.01U
C610	RCE1CKA100BG	16V 10U
C612	RCE1HKA3R3BG	50V 3.3U
C613, 614	ECBT1E103ZF	25V 0.01U
C615, 616	ECEA1VKA330B	35V 33U
C617, 618	RCE1CKA100BG	16V 10U
C619, 620	RCE0JKA101BV	6.3V 100U
C621, 622	ECBT1E223ZF	25V 0.022U
C631	RCE0JKA221BV	6.3V 220U
C632	ECEA1HKA010B	50V 1U
C642	ECBT1E103ZF	25V 0.01U
C671, 672	ECBT1C822MS5	16V 8200P
C673, 674	RCE1CKA100BG	16V 10U
C701, 702⚠	ECEA45V472YB	45V 4700U
C703, 704	ECEA1CKA330B	16V 33U
C705, 706	ECBT1H104ZF5	50V 0.1U
C707 ⚠	RCE1HM221BV	50V 220U
C708	RCE1CKA100BG	16V 10U
C709	ECBT1E103ZF	25V 0.01U
C710	ECBT1C103MS5	16V 0.01U
C711	ECQE1104KF3	100V 0.1U
C712	ECBT1E223ZF	25V 0.022U
C714	ECKR1H103ZF5	50V 0.01U
C731, 732	ECKT1H102KB	50V 1000P
C751	RCE1VKA100BG	35V 10U
C752	ECKR1H103ZF5	50V 0.01U
C799	ECBT1H104ZF5	50V 0.1U
C905, 906	ECBT1H101KB5	50V 100P
C1101, 1102	ECBT1E223ZF	25V 0.022U
C1103-1106	ECBT1H102KB5	50V 1000P

Note: The reference number SA represent the grease and tool used for this unit.

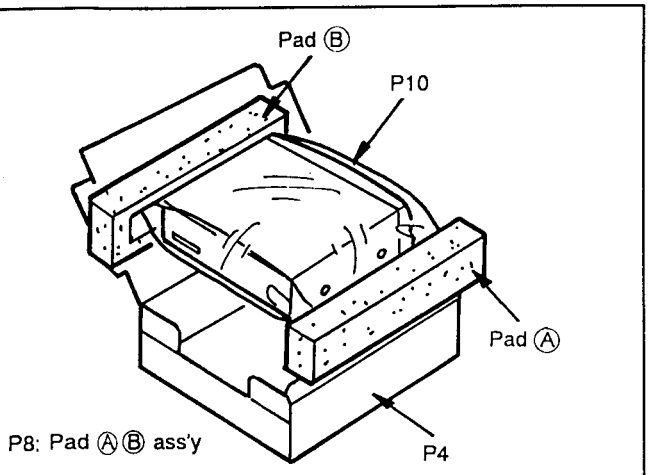
Ref. No.	Part No.	Part Name & Description	Remarks
		CABINT PARTS LIST	
1	RKM0265A-K	CABINET	
2	RHD30007-K1	SCREW	
3	RFKJECH610GC	BOTTOM BOARD ASS'Y	
3-1	RKA0011-3	FOOT	
4	RFKHECH610GC	REAR GRILL ASS'Y	
5	RKQ0089	P. C. B. SPACER	
6	RMC0158	TRANSISTOR HOLDER	
7	RMN0291	HOLDER	
8	RFKGECH610GC	FRONT PANEL ASS'Y	
8-1	RKW0356-V	FL PANEL	
9	RGL0258-Q	PANEL LIGHT	
10	RGU1077-K	BUTTON, POWER	
11	XTBS3+8JFZ1	SCREW	
12	RGW0178-1K	KNOB, MIC VOLUME	
13	RWJ1812220QC	FLAT CABLE(12P) (W501)	
14	RWJ1810220QC	FLAT CABLE(10P) (W502)	
15	RGW0207-K	KNOB, MAIN VOLUME	
16	XTBS26+8J	SCREW	
17	RHD26016	SCREW	
18	RHN90001	NUT	
19	XTB3+10JFZ	SCREW	
20	XTB3+20JFZ	SCREW	
21	RMN0195	FL SPACER	
22	RMN0290	FL HOLDER	
23	XTB3+8JFZ	SCREW	
24	XTW3+15T	SCREW	
25	RMN0191	HOLDER	
26	RWJ1808100XX	FLAT CABLE(8P) (J703)	
27	RMN0282	FAN ANGLE	
28	SYE1128-4	FAN	
28-1	SHE232	FAN	
28-2	SUS271	SPRING	
28-3	SHE233-1	FAN CASE	
28-4	MDN-4RB4MRC	MOTOR	
28-5	SHE234	CAP	
28-6	SJT783	TERMINAL	
28-7	SJS5215	CONNECTOR(2P)	
29	XTB3+12JFZ	SCREW	
30	RMN0190	HOLDER	
		PACKING MATERIALS	
P1	RPG2155	PACKING CASE(SYSTEM)	
P2	RPG2231	PACKING CASE(DECK)	
P3	RPG2232	PACKING CASE(TUNER)	
P4	RPG2352	PACKING CASE(CD)	
P5	RPG2230	PACKING CASE(AMPLIFIER)	
P6	RPN0815	PAD(DECK)	
P7	RPN0816	PAD(TUNER)	

Ref. No.	Part No.	Part Name & Description	Remarks
P8	RPN0858	PAD(CD)	
P9	RPN0817	PAD(AMPLIFIER)	
P10	SPP740	PROTECTION COVER	
P11	XZB25X34C03Y	PROTECTION COVER	
P12	RPQF0047	ACCESSORIES BOX	
		ACCESSORIES	
A1	RAK-CH159WH	REMOTE CONTROL TRANSMITTER	
A1-1	RKK0057-K	BATTERY COVER	
A2	REE0499	SPEAKER CABLE	
A3	REX0511	FLAT CABLE(LONG TYPE)	
A4	REX0608	FLAT CABLE(SHORT TYPE)	
A5	RJA0019-2K	AC POWER SUPPLY CORD	⚠(SF)
A6	RQT2723-G	INSTRUCTION MANUAL	
A8	RQCB0169	SERVICE CENTER LIST	
A9	RSA0007	FM INDOOR ANTENNA	
A10	RSA0012	AM LOOP ANTENNA	
A10-1	RMN0244	ANTENNA HOLDER	
A10-2	XTN3+12AFZ	SCREW	
A11	SJP5213-1	POWER PLUG ADAPTOR	
A12	RFE0014	ANTENNA PLUG	
		GREASE OR JIG/TOOL	
SA1	RFKX0002	COMPOUND GREASE	

■ Cabinet Parts Location

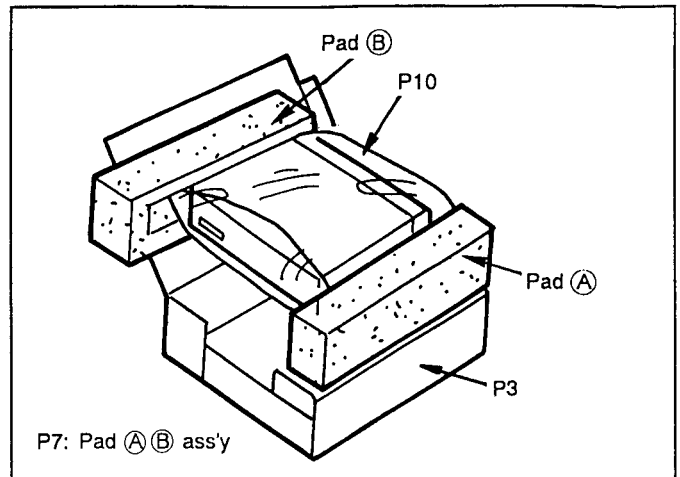


■ Packaging



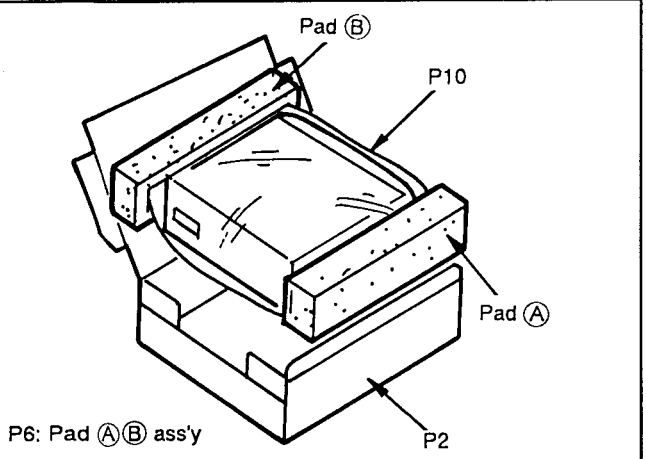
P8: Pad ⒶⒷ ass'y

(SL-CH610: Compact disc changer)



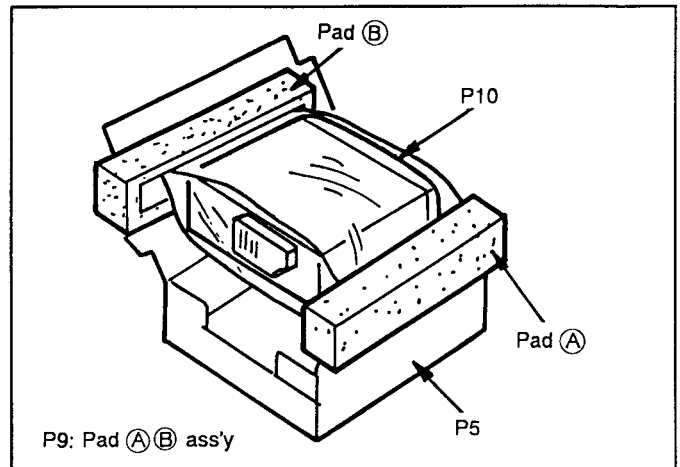
P7: Pad ⒶⒷ ass'y

(ST-CH610: Tuner/sound processor)



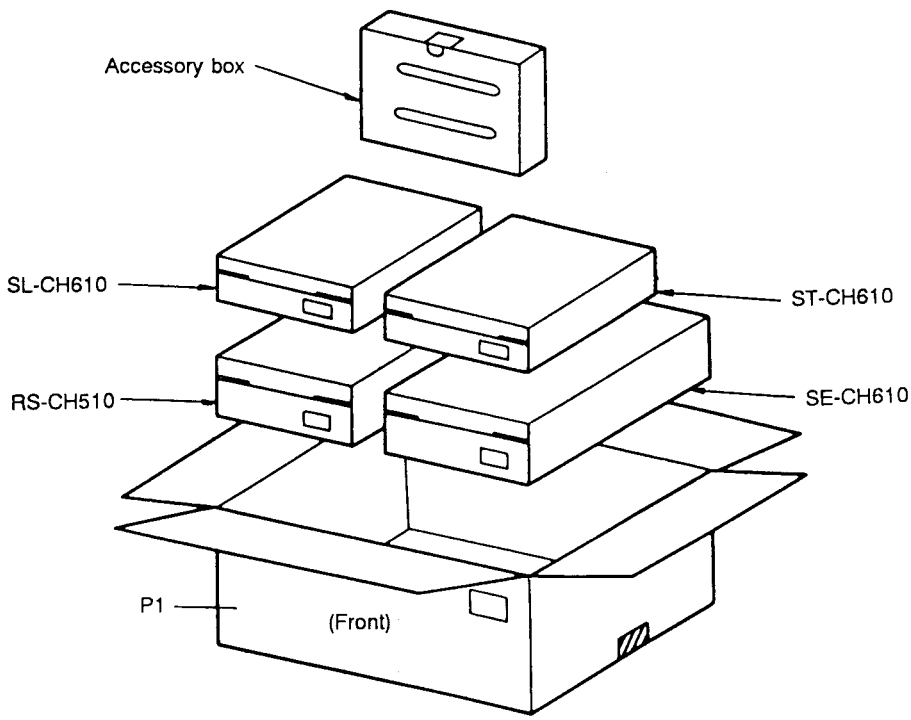
P6: Pad ⒶⒷ ass'y

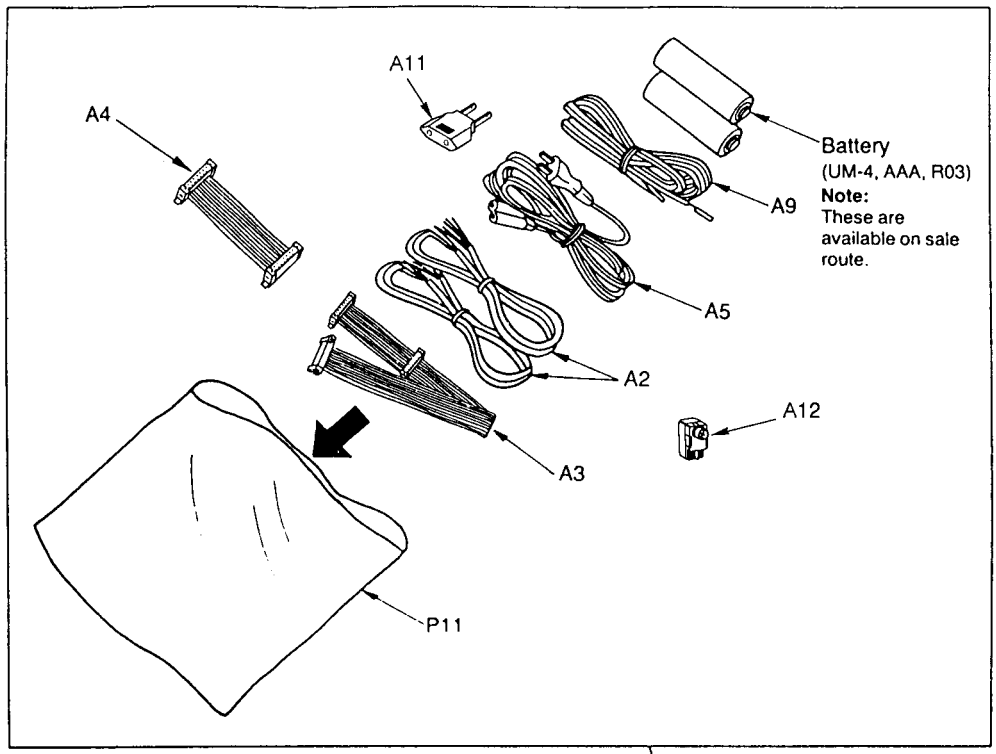
(RS-CH510: Cassette deck)

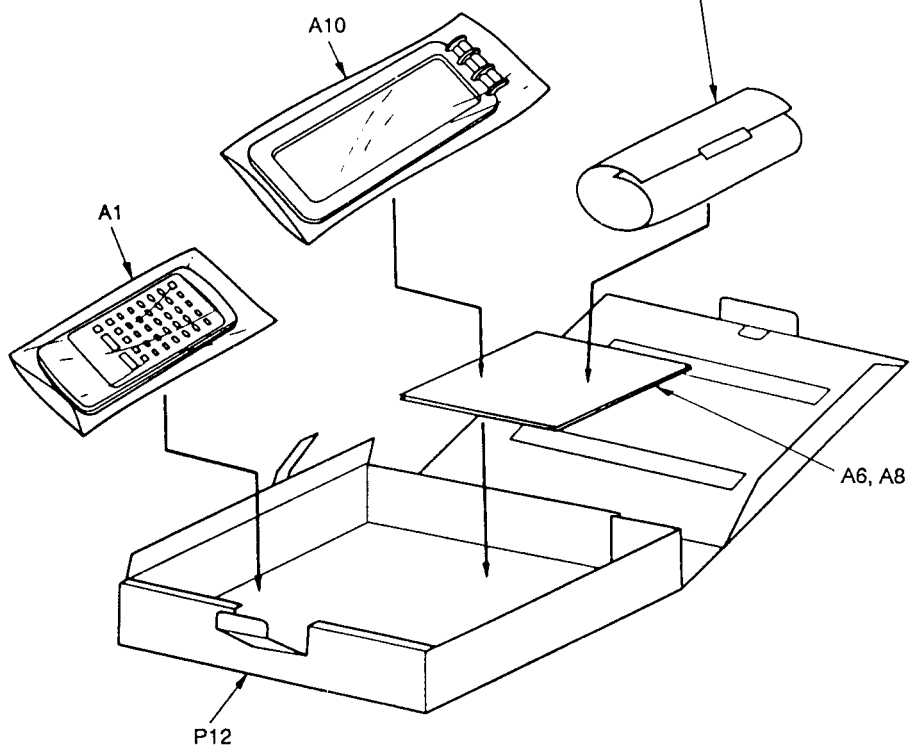


P9: Pad ⒶⒷ ass'y

(SE-CH610: Amplifier)







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